PROSPECTIVE PAYMENT
ASSESSMENT COMMISSION

MEDICARE AND THE AMERICAN HEALTH CARE SYSTEM

REPORT TO THE CONGRESS

JUNE 1995

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June 1, 1995

The Honorable Newt Gingrich
Speaker of the House
United States House of Representatives
Washington, D.C. 20515

Dear Mr. Speaker:

I am hereby transmitting to the Congress the report *Medicare and the American Health Care System.* This report has been prepared by the Prospective Payment Assessment Commission as required by Section 1886(e)(2)(C) of the Social Security Act.

Sincerely,

Stuart H. Altman, Ph.D.
Chairman

Enclosure

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June 1, 1995

The Honorable Al Gore
President of the Senate
United States Senate
Washington, D.C. 20510

Dear Mr. President:

I am hereby transmitting to the Congress the report *Medicare and the American Health Care System.* This report has been prepared by the Prospective Payment Assessment Commission as required by Section 1886(e)(2)(C) of the Social Security Act.

Sincerely,

Stuart H. Altman, Ph.D.
Chairman

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Executive Summary

Executive Summary

The American health care system is undergoing major structural transformations in the financing and delivery of care. Since Medicare and Medicaid were enacted three decades ago, the types of services available, the way care is provided, the kinds of conditions that can be treated, and the outcomes that can be achieved have all changed dramatically. During this period, the utilization and cost of health services have mushroomed, due in part to the way that care is financed. National health expenditures in 1994 were more than 25 times those in 1960. Access to quality care, however, remains limited for a large and growing number of people.

The relentless growth of health care spending has presented repeated challenges to the solvency of the Medicare program. Until now, the Congress has responded by incrementally slowing the rise in Medicare spending and increasing the Medicare payroll tax. Despite these actions, the Medicare Hospital Insurance Trust Fund is projected to become exhausted by the year 2002, and the Congress is considering fundamental changes in the operation of the program.

The pressure of spiraling costs has led employers to move to capitation and other managed care strategies to control their payments for workers' health care benefits. In combination with Medicare's cost-containment initiatives, the accelerated growth of managed care in the private sector has intensified the pressure on providers to limit their costs. As a result, the historical trend of increasing expenditures on health care, which has been interrupted by only a few brief periods of deceleration associated with specific policy initiatives, has slowed. The annual rate of growth of national health expenditures between 1990 and 1993 was more than one-fifth lower than that experienced during the previous decade. More recent estimates of spending indicate an even sharper decrease in the rate of growth. Whether this latest slowdown is another temporary pause in the long-term trend or a more lasting result of basic changes in the health care sector can be confirmed only over time. However, there is widespread evidence that heightened competition is leading payers and providers alike to make fundamental changes in the way they conduct business.

While these changes in the financing and delivery of care may slow the rise in spending, they could also adversely affect providers that traditionally have furnished care to indigent and underserved populations. A price-conscious health care system may limit the ability of many of these providers to subsidize the care they have historically furnished to the uninsured. Further, the financial position of providers sponsoring research and graduate medical education programs might be compromised as cost-containment pressures intensify.

In this report, the Prospective Payment Assessment Commission (ProPAC) discusses the Medicare program and its substantial role in shaping the American health care system, as well as the program's responses to the changing environment. Chapter 1 describes trends in national health expenditures, the forces that have contributed to rising costs, and the factors that have affected the health care environment most recently. Next, since hospitals account for the largest share of health care spending and thus have been the primary focus of cost-containment activities, their financial status is examined in Chapter 2. Medicare payment policy and its effects, the determinants of hospital costs and overall profitability, and the interaction between Medicare and other payers are considered.

The discussion then shifts to health care utilization and insurance coverage in Chapter 3. The growth and changing mix of services used by Medicare beneficiaries and other groups are described. In addition, the chapter highlights recent initiatives that have altered Medicare, Medicaid, and private health insurance. Chapter 4 examines the environment in which health care providers operate, focusing on the interaction between providers and the new organizational structures emerging in response to growing competition for patients and the spread of managed care.

In Chapter 5, the use of health care resources across geographic areas is explored. ProPAC

presents newly developed data on the cost of services provided to Medicare aged enrollees in each state, which have been adjusted for some of the factors that cause geographic cost differences. The variation in the resulting standardized resource cost per aged enrollee suggests additional reasons for state differences. The chapter also describes recent state health reform initiatives.

HEALTH CARE SPENDING GROWTH

During the 1980s, national health expenditures increased at an annual rate of 10.7 percent. This was considerably faster than the growth in the rest of the economy. As a result, health care spending rose from 9.3 percent to 12.6 percent of the country's gross domestic product. Projections in the early 1990s indicated that, by the end of the decade, health care spending would account for nearly one-fifth of the nation's total economic activity.

More recently, however, these expenditures have risen at a slower rate than anticipated. This may be traced to changes in the major components of cost growth: economywide inflation, price increases specific to health care, rising use of health services, and population growth. Except for population growth, which has remained steady, the pressure exerted by each of these factors appears to have diminished in the past few years. Economywide inflation has dropped; health care specific price rises have moderated—in fact, falling below those in the rest of the economy; and the increase in health care services used by each person is declining.

The structure of health care financing continues to change. Before the enactment of Medicare and Medicaid in 1965, private sources (including individuals) accounted for 75 percent of all health care spending. By 1980, this share had dropped to 58 percent. Although it increased somewhat during the following 10 years, the private share of spending reached an all-time low of 56 percent in 1993. Slower growth in the private sector is leading the most recent trend. The rate of increase in private health insurance spending between 1990 and 1993 was only half that seen during the previous decade. Medicare spending, which experienced below-average growth between 1985 and 1990, rose more than 50 percent faster than total health care spending between 1990 and 1993. Medicaid increased at almost 300 percent of the overall rate.

The delivery of health care has changed as well. While expenditures on all hospital services rose at about the average rate for all health care spending between 1990 and 1993, outpatient spending growth consistently has been in double-digits. As a result, the share of expenditures accounted for by hospital outpatient services climbed from 4.1 percent in 1980 to 8.7 percent in 1993. Home health care has been the fastest growing part of the health care industry, increasing at an annual rate of 19.1 percent between 1990 and 1993.

COST CONTAINMENT

The relationship between hospital costs and sources of revenue in the late 1980s illustrates the need for cost-containment measures beyond the efforts of individual payers. Through the early 1980s, Medicare's payments were about equal to what hospitals spent to treat program beneficiaries, Medicaid's payments were somewhat lower than Medicare's, and uncompensated care losses were offset primarily by payments from private sources that exceeded costs. In the second half of the decade, Medicare imposed stricter limits on its rates and government budget pressures held down Medicaid payments. At the same time, hospital revenues from private payers substantially outpaced costs: Between 1980 and 1986, private payments exceeded hospital costs by 12 percent to 16 percent; by 1992, this differential was 31 percent. While Medicare successfully held down its payments, hospitals were able to engage in cost shifting—that is, generating increasing surpluses from private payers to support continued rapid cost growth.

More recently, this pattern has begun to change. In 1993, private payments relative to costs fell for the first time, as payers became more aggressive in limiting their payment increases. This pressure appears to have increased even since then and, combined with ongoing efforts to control the rise in public sector spending, it has forced hospitals to constrain their cost growth.

The recent slowdown in health care spending has coincided with the spread of managed care in the private insurance market. In 1988, 73 percent of

privately insured individuals had traditional indemnity insurance; by 1993, not only had market share for these plans fallen to 33 percent, but nearly all had adopted some managed care techniques. In 1994, about 40 percent of all firms that provided health insurance coverage to their employees offered only managed care plans.

In the public sector, managed care has also grown dramatically. As of mid-1994, the number of Medicaid managed care enrollees had jumped by 57 percent in one year. In addition, although only 8.7 percent of all enrollees were in any of the several types of Medicare managed care arrangements as of March 1995, enrollment in these plans had increased by more than 50 percent since 1991.

Despite the reduced growth of health care spending, the health care industry faces numerous problems and unmet needs. Public sector spending continues to increase at a rate that exceeds the economy's ability to sustain it: The Medicare Hospital Insurance Trust Fund is projected to become insolvent shortly after the turn of the century. Increased pressure on providers to contain costs may not be distributed evenly. Moreover, certain providers, such as those that are located in remote areas or that serve indigent populations, may be at a distinct disadvantage in responding to such pressures. In addition, certain functions (like health work force training and research) carried out by some providers may not be adequately funded in an increasingly price-competitive environment.

Furthermore, the uninsured population continues to grow. During 1994, 41 million people had no health insurance at a given time during the year, up from 24 million in 1980. Lack of insurance was not restricted to the unemployed or the poor. More than half of the uninsured were in households in which the head of the family worked full time for the entire year; half were in households with annual incomes exceeding $20,000, and 20 percent were in households with annual incomes of $40,000 or more. As competition and cost-containment pressures intensify, individuals without insurance may increasingly be excluded from the health care marketplace.

HOSPITAL PAYMENTS AND COSTS

Although the share of health care expenditures for hospital services has declined, it was still almost 37 percent in 1993. Consequently, hospitals account for the largest part of the absolute increase in spending. While 28 percent of hospital revenues come from Medicare, the Medicaid program is the most rapidly growing source of these funds. Medicaid hospital payments grew more than 60 percent faster than total hospital spending. Increased Federal Medicaid expenditures (primarily through disproportionate share payments) were responsible.

Payments for operating and capital costs under Medicare's prospective payment system (PPS) account for almost three-quarters of all Medicare hospital payments. Policy decisions have had a significant effect on the level of payments under PPS and on how these payments are distributed among hospitals.

Since PPS began, the per-case payments received by certain groups of hospitals have increased much faster than those for other groups. Some of this disparity is due to particular features of the system. Hospital groups that have experienced higher than average case-mix index increases, for example, have received correspondingly higher payment increases—some of which correspond to greater resource requirements. Policy changes, generally implemented to mitigate perceived inequities due to the initial design of PPS, have also affected the distribution of payments. Rural hospitals—especially sole community hospitals—and both urban and rural disproportionate share hospitals have benefited from modifications to PPS.

Although almost half of all hospitals under prospective payment are located in rural areas, the vast majority of Medicare patients are treated in urban hospitals. Urban hospitals receive an even larger share of Medicare payments; while they account for 80 percent of all PPS discharges, they receive 87 percent of all PPS payments. Part of this discrepancy is due to the higher costs borne by urban hospitals and the more complex cases treated by them. Part is also due to payment adjustments for hospitals that have teaching programs or that treat a disproportionate share of low-income patients—hospitals that tend to be located in urban areas.

PPS was designed to achieve cost containment by providing hospitals with incentives to be more efficient in their service delivery. In the first year of

prospective payment, hospitals held their cost growth well below the historical trend, while Medicare payments per case rose sharply. The result was an aggregate PPS margin (which measures the difference between PPS payments and Medicare operating costs as a proportion of payments) that approached 15 percent.

In the following six years, however, cost growth resumed its rapid pace, while Medicare payments were constrained; by the seventh year, costs exceeded payments, resulting in a negative PPS margin. In the eighth and ninth years, with Medicare operating costs exceeding payments and intensifying pressure from private payers, costs began to grow more slowly and the decline in the aggregate PPS margin began to level off. In the tenth year, which overlaps fiscal years 1993 and 1994, Medicare operating costs per case increased by 1.4 percent—the smallest in the program's history. As a result, the PPS margin increased for the first time, exceeding zero after three years of negative values. If the current cost trend continues, this margin will continue to rise, to 2.3 percent for the current (twelfth) year.

PPS margins in the tenth year varied greatly both across hospital groups and for individual hospitals within those groups. Urban hospitals had higher margins than rural hospitals (although the gap between them had narrowed considerably by the tenth year of PPS), and teaching hospitals had higher margins than non-teaching ones (with the gap widening over time). Proprietary hospitals, after several years of falling PPS margins caused by rapidly rising costs per case, began to control their costs and their PPS margin increased sharply. In almost every group, however, there were hospitals whose PPS margins were extremely high or low. Moreover, the gap between those that were doing well under PPS and those that were not was larger than in the early years.

In contrast to the swings in the PPS margin, the overall financial status of hospitals has been fairly stable. The aggregate total hospital margin, which compares total revenues and expenses (including both patient care and non-patient care activities) for facilities as a whole, was lower in 1993 than in the early years of PPS, but it has risen since the mid-1980s. In fact, the total margin was above levels prior to PPS, although the financial risk facilities faced was lower in the earlier years.

As with PPS margins, total margins varied greatly across hospital groups and for individual hospitals within a particular group. Both the level and distribution of total margins, however, were quite different from PPS margins. Rural hospitals, whose aggregate PPS margin was lower than that of urban hospitals in the tenth year of PPS, had a higher total margin. Hospitals with the greatest level of teaching intensity, which had by far the highest PPS margin, had an aggregate total margin among the lowest of any hospital group. Disproportionate share hospitals in large urban areas also had a high PPS margin and low total margin.

These differences between PPS and total margins suggest that the extent of cost shifting—as well as the need and ability to do so—varies markedly by hospital. Those experiencing large losses on uncompensated care and on Medicaid and Medicare patients may have more need to raise their revenues from private payers. For some hospitals, however, the share of private-pay patients may be too small to cost shift successfully. Cost shifting thus may result in an inequitable distribution of overall hospital payments, along with a disproportionately large burden on some payers. With increasing pressure from some private payers, the need and ability to cost shift may be even more unequal across facilities. This pressure is particularly intense for hospitals with high patient care costs and in areas where managed care has heavily penetrated the market. To the extent that hospital costs are high due to inefficiency, this pressure may force them to become more efficient. However, it may also affect the services that hospitals in some areas provide, threatening access to quality care for certain populations.

HEALTH CARE USE AND INSURANCE COVERAGE

Medicare expenditures for all health care services topped $166 billion in 1994. The Medicare program's 36.9 million enrollees were responsible for an additional $31.4 billion through copayments and deductibles for covered services. The majority of payments were made on behalf of Medicare's aged beneficiaries, although the 11 percent of enrollees who qualify for benefits due to disability or end-stage renal disease account for a disproportionate share of expenditures.

Inpatient hospital care consumed just over half of Medicare resources; however, its share of the total has declined. Payments for post-acute services—skilled nursing, home health, and hospice—continued their rapid escalation, but still made up only 14 percent of Medicare outlays in 1994. Ambulatory care, comprising physician and all outpatient services, was 32 percent of the Medicare bill and grew at about the same rate as total spending.

The shares of expenditures accounted for by the various provider types reflect the changing use of health care services. The hospital inpatient setting, while still a dominant provider, did not face the same levels of utilization growth as others. Medicare discharges rose modestly in 1994, length of stay was stable, and payment growth per admission continued a three-year decline. The story was quite different for post-acute services. The number of enrollees who used Medicare's skilled nursing facility benefit continued to go up, although the average length of stay stabilized over the last two years. Growth rates for payments per person remained in double-digits, indicating heightened intensity through greater ancillary service use. For home health services, people served, visits, and payments all continued to rise at unprecedented rates.

Despite the movement of Medicare beneficiaries and other groups away from the costlier hospital inpatient setting, increases in the volume and intensity of services continued to drive substantial expenditure growth. Whether funded through public programs, like Medicare or Medicaid, or by employers, which sponsor most private insurance, the growing share of resources devoted to health care is triggering a range of responses. The past decade's lower growth rates for inpatient hospital and physician services are, in part, a testament to increased Medicare control over the payments for these services. Most Medicare payments, however, continue to be made on a fee-for-service basis, which provides no incentives to control use.

As a strategy to influence utilization and intensity as well as price, public and private payers are increasingly adopting managed care techniques. Whether these techniques are incorporated into their indemnity fee-for-service payment methods or adopted by contracting with or creating health maintenance organizations that combine the service delivery and financing functions, the objectives are similar. Used in various combinations and implemented in different ways, managed care strategies have shown some promise in reining in cost growth. These methods are designed to control the service use of enrollees; modify provider practice patterns; and give enrollees, providers, and insurers incentives to minimize costs by sharing the financial risk of service delivery.

Medicare operates a managed care risk contracting program that is optional for health plans and enrollees. In March 1995, 6.6 percent of its beneficiaries were enrolled in one of 144 participating health plans. Because these plans receive a capitated payment to provide all Medicare-covered services to enrolled beneficiaries, they have incentives to control the use of services as well as provider payments. Evidence indicates that Medicare managed care enrollees indeed receive a less intensive mix of services than other beneficiaries. This, however, may be partly because healthier-than-average beneficiaries enroll in managed care plans.

Most state Medicaid programs (44 plus the District of Columbia) have instituted some type of managed care. Although about one-quarter of Medicaid-eligible persons were in a managed care arrangement in 1994, they accounted for less than 7 percent of Medicaid payments. This is because a substantial portion of Medicaid dollars are for long-term care and for services for the mentally ill, and the beneficiaries who use those services typically are not enrolled in managed care plans.

Most of the population under 65 receive health insurance coverage through their employer or their spouse's employer. As health benefit spending has become a larger share of business expenses, employers have stepped up activities to limit their outlays. These may entail increasing worker premium contributions; limiting benefits or coverage; and negotiating better premium values, possibly by joining forces with other purchasers of care. These techniques may be having an impact: Employer costs for health benefits actually declined by 1.1 percent between 1993 and 1994.

As managed care techniques proliferate and as providers grapple with heightened pressure to control costs, the quality of health care delivery prompts more concern. Overuse of some services,

as well as variations in how services are provided, suggest that selected reductions in utilization do not necessarily compromise quality of care and could even lead to improvements. However, information is not adequate to precisely target inappropriate or excessive service use. In addition, there is widespread interest in measuring and comparing quality across providers and settings. As the purchasers of health care services look to control their costs and providers increasingly compete on price, indicators of quality need to be developed to better compare the value of services across providers and settings. Both public and private sector organizations are working on such measures.

The intensified focus on costs and competition among providers and plans also raises issues regarding access to services. People without health insurance probably face the greatest barriers to obtaining appropriate health care. As payment growth is constrained further, providers will be less willing and able to care for those who cannot pay. Another potential threat to access is the incentive in capitated payment methods to reduce service use. This might raise difficulties, particularly for vulnerable populations. State Medicaid managed care contracting requirements illustrate the kinds of activities that states and plans can employ to monitor and ensure appropriate access. States may, for instance, require plans to contract with particular types of providers that have experience with vulnerable populations, establish grievance procedures for enrollees, and monitor complaints against plans from enrollees and providers. How these ultimately affect service delivery, however, has not been fully evaluated.

CHANGING RELATIONSHIPS AMONG PROVIDERS

The intensified demand for constraints on health care cost increases has affected not only the type and level of services individuals receive, but also the structural relationships among providers. In response to payment methods that increase both the financial risk providers must bear and the scope of services for which they are responsible, providers are joining together and also aligning with insurers. It is difficult to characterize these relationships because of their newness and their unique adaptations to local market conditions. What is certain, however, is that these alliances can have a major impact on the traditional modes of health care delivery in this country.

The most obvious effect of the structural changes in delivery is the types of providers available. The number of hospitals is falling, particularly large and government-owned facilities. These reductions reflect the shift in the provision of care away from acute inpatient to ambulatory settings. Growth in the types of ambulatory providers has been in response to technological advances that have expanded the range of treatments available and have allowed more services to be provided in less intensive settings. Increasing emphasis on controlling expenditures has redoubled efforts to move patients out of expensive hospital inpatient settings as soon as possible, which has in part fueled the growth in post-acute providers like nursing facilities and home health agencies.

More profound, however, are the structural changes in provider organization and integration. Mergers between similar providers to gain efficiencies of scale and scope have occurred before, but seem to have taken off in recent years. Relationships among facilities have been forged to offer a broader range of services, to secure market position, or to form an entity that is more attractive to purchasers seeking contractual relationships. This market activity is stimulated by price competition among providers for patients and by contracts with plans. Heightened pressure by purchasers to obtain larger payment discounts has also contributed to realignments of relationships among facilities. The types of entities being developed are varied and reflect local market conditions and provider goals. Their decisions regarding target geographic markets and strategies to secure market position are a function of these and other factors.

A recent ProPAC survey examined the strategies hospitals used to work with physicians to improve hospital financial performance. Facilities have tried to align incentives to provide cost-effective care by providing physicians with hospital financial information. Strategies have included involving physicians in the hospital capital budgeting process, giving them cost information on major ancillary procedures, and holding physician department heads responsible for their area's financial performance. These techniques, however, were not fully adopted when the survey was conducted in 1993.

Efforts to make operations more effective through formal quality programs existed in a significant number of hospitals. Integrated information systems, which many believed essential for network development, had been implemented in about half of the facilities, but the systems often were not comprehensive. While the survey showed a host of available techniques for bolstering hospitals' financial health, many have yet to be widely used. Further, certain factors considered critical to success often were lacking.

New and changing alliances among providers have raised concerns about the anticompetitive aspects of these arrangements. At the Federal level, the Department of Justice and the Federal Trade Commission are responsible for maintaining the conditions of a competitive market conditions. Their challenge is to balance the potential benefits of integrated delivery entities against the possibility of unwarranted reductions in consumer choice. Given the complexity of these changes, these agencies have issued policy guidelines which establish the principles that will be used to evaluate the competitive effects of the activity in question. Other potential legal aspects of changing provider relationships include physician self-referral bans, which attempt to limit the financial gain a physician may enjoy from referring patients to facilities in which the physician has a financial interest. In addition, mergers between tax-exempt hospitals and for-profit providers raise questions about the tax treatment of the resulting organization.

The impact of these changes is likely to vary. Health care delivery may become more efficient as providers compete to position themselves in the market. On the other hand, as providers form ever-larger entities, real competition might diminish. Access to a coordinated, integrated set of services delivered in the most appropriate setting might be improved in some markets and for certain populations. Some providers are not likely to survive, however, which may impede access to services in affected areas. No effective new mechanism for financing the care of poor, uninsured people has been developed, even though the opportunities to provide such funding through cross subsidies are diminishing. Finally, quality of care may improve as purchasers take a more active role in evaluating what they buy and as clinical care is integrated across providers. Countervailing pressure, however, could be exerted by the financial risk that increasingly is being borne by providers.

COSTS, PAYMENTS, AND RESOURCE USE BY STATE

The delivery and financing of health care vary substantially across the country, reflecting geographic differences in population characteristics, economic conditions, the extent and types of regulatory activity by state and local governments, the supply and organization of providers, and the configuration of payers. To begin to understand the implications of these differences, ProPAC examined per capita health care costs for each state.

Although Medicare is a federally administered, nationwide program with uniform coverage rules and benefit design, both the level of spending and the cost of resources used per aged enrollee vary widely from state to state. Oregon, for example, had the lowest costs for providing Medicare services to its residents in 1991. The state's per enrollee resource costs were 25 percent below the national average. Louisiana's resource costs per enrollee were highest, some 17 percent above the average.

Local input prices and the age and sex composition of the Medicare population in each state have a major impact on resource costs. Standardizing resource costs for these factors changes the measured costliness of states relative to the national average. The range of variation across states in standardized costs, however, remains as large as the variation in unstandardized costs.

Some of the states that generally are considered leaders in either private market or government-sponsored reform, such as Oregon, Hawaii, and Minnesota, are among those with the lowest standardized resource costs. But other states with low costs, such as New Hampshire and Idaho, have largely unregulated fee-for-service systems. The six states with the highest standardized resource costs per enrollee—Louisiana, Alabama, Mississippi, Florida, Tennessee, and Georgia—are all located in the South.

Costs appear to be highly correlated with the health status of the state's population. Six of the 10 states with the best health status (ranked according

to an average of several indicators of morbidity and mortality) are also among the 10 with the lowest standardized resource costs per enrollee. Similarly, states with low health status tend to have high standardized resource costs.

Nationwide, the Medicare program was responsible for 82 percent of the costs of health care resources used by aged enrollees for covered services in 1991. Medicare beneficiaries were responsible for another 16 percent, either out of pocket or through other insurance coverage. In addition, services used by Medicare aged enrollees at Department of Defense (DoD) or Department of Veterans Affairs (VA) facilities constituted about 3 percent of resource costs. These proportions varied across states. Medicare beneficiaries and payers on their behalf accounted for 19 percent of resource costs in South Carolina and only 13 percent in California. The share accounted for by services provided by DoD and VA facilities ranged from 7.4 percent in South Dakota to 1.2 percent in New Jersey.

There is wide variation across states in the mix of services used as well. Although West Virginia had the third highest standardized resource costs per enrollee for hospital inpatient services in 1991, its standardized resource costs for post-acute care and ambulatory care were well below the national average. Utah, which had the lowest hospital inpatient standardized resource costs, was fourth highest for post-acute care.

The relative contributions of volume and cost per unit to standardized resource costs also vary across states. The volume of services furnished, however, appears to have a stronger effect on the level of standardized resource costs. Hawaii, for example, had low inpatient standardized resource costs per enrollee despite having the second highest cost per admission, because it had the lowest admissions per enrollee. Six of the 10 states with the lowest skilled nursing standardized resource costs per enrollee had per day costs above the national average, but all were considerably below the average for patient days per enrollee. Of the 10 states with the lowest home health standardized resource costs per enrollee, nine were above the national average cost per visit, but their visits per enrollee were about half the national average or less.

Managed care has grown rapidly, but its influence varies from area to area. In California, 51 percent of the privately insured population was enrolled in a health maintenance organization (HMO) in 1993; at the same time, Wyoming and Alaska had almost no HMO enrollment. Moreover, the states with the highest HMO enrollment tended to have lower than average rates of hospital per capita cost growth, while those with the lowest HMO enrollment tended to have higher than average hospital cost growth. Three of the four states with the lowest rates of hospital cost growth, however, had lower than average HMO enrollment, indicating that a number of factors contribute to slower cost growth.

Managed care also appears to be related to the mix of service use. The 10 states with the highest Medicare HMO enrollment used fewer resources in the hospital inpatient setting than the national average in 1991, but somewhat more skilled nursing and ambulatory care. These states also had considerably less home health use than the national average.

CONCLUSIONS

The unrelenting growth in health care expenditures that has driven most of the changes in health policy in recent years shows signs of abating. This has happened before, however, when national cost-containment programs have been developed or implemented, with growth resuming at its historic pace when the new policies were withdrawn. There is evidence, nevertheless, that the recent trend may be more than a temporary reaction to the prospect of Federal health care reform that looked imminent last year. Downturns in hospital cost growth and reduced cost shifting to private payers may be sustained by more fundamental changes in the financing and organization of health care.

Many of these changes are so recent that not enough data exist to measure their effect. Nonetheless, recent trends point to their significance. That private and public payers alike are attempting to control health care outlays through managed care is but one. Another is the use of capitated payment methods to shift the risk of rising costs from the premium payer to the insurer or provider. Private insurers are subjecting rising costs to increased scrutiny, which may cause them to limit their role in subsidizing public payers and unsponsored

health care. These and other changes appear to be dampening cost growth.

In charting its course over the next few years, Medicare must consider its fiduciary responsibilities to the Trust Funds and the American people as well as its commitment to financing appropriate, quality care to its beneficiaries. The program must implement effective cost-containment strategies because, despite the progress made toward controlling hospital and physician spending, the sources of financing for health care services are showing severe signs of strain. Equally important, health care for Medicare beneficiaries needs to be protected. The Medicare program has obligations to ensure access to needed services by supporting adequate numbers and distributions of providers. Moreover, the program is an important source of support for certain functions of some providers, such as teaching and research, that have broader value to the American public.

Balancing these competing responsibilities will involve some difficult choices. Objective data and analyses of the impact of various options should inform these decisions. Policy changes must be assessed to determine their effect on those insured by public programs or private insurers, as well as those without health care coverage. Further, their impact on the financial viability of all payers and providers must be evaluated. Informed policies will be needed to identify and promote desired changes in health care financing and delivery, and adapt the Medicare program to its evolving environment.

Chapter 1

Issues in Health Care Financing and Spending

Chapter 1

Issues in Health Care Financing and Spending

The rapid growth in national health care spending appears to be moderating. Total expenditures grew by 7.8 percent from 1992 to 1993—the smallest increase since 1986 and among the smallest over the past three decades.[1] Even slower growth in aggregate and per capita expenditures is projected through 1995.[2] The extent to which this marks the beginning of a long-term trend is yet to be determined. It may be more significant than previous slowdowns, however, given the dramatic structural changes now occurring in the delivery and financing of health care.

Payment constraints for acute hospital inpatient services and advances in medical technology have led to a continued decline in per capita admissions and a rise in the use of services in ambulatory, post-acute, and other nonacute care settings. The proliferation of providers in these areas also has contributed to the increased use of non-hospital services. Private and public payers are responding by adopting managed care techniques to control both the total volume of services provided across sites of care and the price per unit of service.

These circumstances have led to structural changes in the delivery of health care. Declining use of acute inpatient services has created excess hospital capacity and greater competition for patients among hospitals and other types of facilities. Further, competition for patients has escalated as managed care plans contract selectively with providers, thus limiting enrollees' choice of providers and restricting specialty referrals. Providers are responding by collaborating with one another and developing integrated delivery systems to secure their market position, maintain revenues, and collectively manage financial risk. New arrangements like these are changing longstanding relationships among providers, insurers, and patients, and will likely affect the delivery of services in the future.

Recent changes in the financing and delivery of health care have the potential to slow the growth in spending by reducing excess capacity and enhancing overall efficiencies. Provider consolidation may improve quality of care through the elimination of services of little or no value and better coordination of service delivery across sites of care. Greater competition, however, can have adverse effects if insurance plans or providers attempt to control their costs by accepting only the healthiest individuals or by failing to provide appropriate services. People who are uninsured or at high risk for illness, those who cannot afford to travel to selected providers, and those living in underserved areas may be at a disadvantage in a highly competitive health care system. The providers that care for these vulnerable populations and those that furnish other socially valuable services, such as medical education, also may be disadvantaged.

In this report, the Prospective Payment Assessment Commission (ProPAC) examines the Medicare program and the American health care system. The report provides information regarding the impact of Medicare policies on hospitals and other health care providers, other public and private payers, and individuals in a continuously changing environment. This chapter begins by describing trends in national health care expenditures in aggregate and by source of payment and type of provider. This is followed by a synopsis of the overall effects of past cost-containment measures and the strategies that are now being implemented. The chapter concludes by discussing how the distribution of the burden of health care costs is changing.

Chapter 2 provides information on the financial condition of hospitals—including revenues, expenses, and margins. Chapter 3 describes the use of health care services by Medicare beneficiaries, Medicaid enrollees, and the privately insured. It

also looks at access to quality care and how this may be influenced by managed care. Chapter 4 focuses on providers' responses to the changing financial environment, especially the new relationships developing among providers and the factors shaping these relationships. Chapter 5 presents state-level data on geographic variation in costs and spending for Medicare-covered services furnished to aged beneficiaries. It also examines the relationship between payments and costs for different payers and states' recent health reform activities.

TRENDS IN NATIONAL HEALTH CARE EXPENDITURES

Total national spending for health care rose rapidly and steadily throughout the 1960s and 1970s except for temporary slowdowns in direct response to specific policy interventions.[3] After decelerating in the early to mid-1980s, the rate of growth in aggregate expenditures increased through 1990. Health care spending continues to rise; the rate, however, is slowing. Although the recent trend is encouraging, its long-run significance is uncertain.

Aggregate health care spending more than doubled during the 1980s, from $251.1 billion in 1980 to $696.6 billion in 1990 (see Table 1-1).[4] On average, total expenditures increased by 10.7 percent per year during this time, 3.3 percentage points faster than the nation's total economic output. As a result, the health care industry, which consumed 9.3 percent of the gross domestic product (GDP) in 1980, accounted for 12.6 percent in 1990.[5]

Rising aggregate expenditures reflect the combined effects of four major factors: economywide inflation, input price increases above general inflation that are specific to the health care industry, increases in the volume and mix of resources used to provide health care services per person (referred to as intensity), and population growth. Fluctuations in annual growth rates reflect changes in these factors and their relative importance.

General inflation is by far the largest contributor to rising expenditures. Inflation, which dropped from 10 percent in 1981 to 3 percent in 1986, primarily explains the decline in health spending growth during that period (see Figure 1-1). After accelerating again, inflation accounted for 39 percent of the total increase in health expenditures from 1987 to 1990. At the same time, the population grew about 1 percent annually, accounting for another 10 percent. The rest of the spending hike was attributable to health sector input price inflation and increases in the intensity of resources used to provide health care.

Table 1-1. National Health Spending, Selected Years

Year	Total Spending (In Billions)		Per Capita Spending	
	Nominal	Real[a]	Nominal	Real[a]
1980	$251.1	$452.7	$1,068	$1,926
1985	434.5	599.3	1,761	2,428
1990	696.6	790.9	2,684	3,048
1991	755.6	822.6	2,880	3,136
1992	820.3	867.1	3,094	3,271
1993	884.2	907.4	3,301	3,388
1994[b]	940.8	940.8	3,478	3,478
1995[b]	1,007.7	977.4	3,690	3,579
Average annual change				
1980-1990	10.7%	5.7%	9.7%	4.7%
1990-1993	8.3	4.7	7.1	3.6
1993-1995[b]	6.8	3.8	5.7	2.8

[a] Adjusted by a variant of the consumer price index for all urban consumers (CPI-U-X1) and expressed in 1994 dollars.

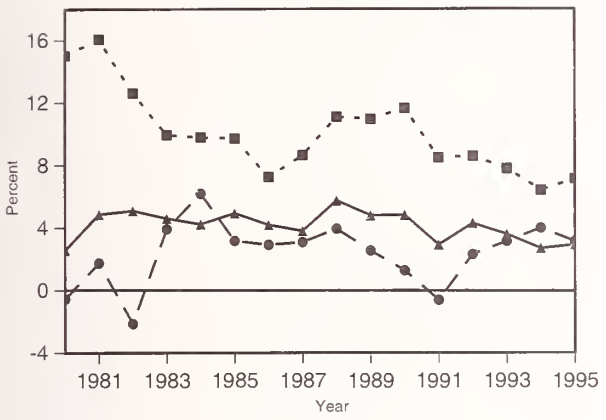
[b] Projection.

SOURCE: Health Care Financing Administration, Office of the Actuary, and the Congressional Budget Office for projections. Population estimates and projections from the Social Security Administration.

Recently, however, national health care spending has grown more slowly. Total expenditures rose to $884.2 billion in 1993, a yearly rate of 8.3 percent since 1990. Likewise, growth in health care spending per person declined from an average annual rate of 9.7 percent from 1980 to 1990 to 7.1 percent from 1990 to 1993. Lower inflation overall and within the health care industry explains most of this change.

Removing the effects of general price inflation and overall population growth from aggregate expenditures produces a better picture of the fundamental elements underlying health care spending. The trend in real per capita spending reflects changes in the amount and types of health services provided to each person, as well as price increases above economywide inflation for those services.

Figure 1-1. Change in National Health Spending, 1980-1995 (In Percent)



Note: Real per capita national health spending is adjusted by a variant of the consumer price index for all urban consumers (CPI-U-X1) and expressed in 1994 dollars. Real per capita GDP is adjusted by GDP implicit price deflator and expressed in 1994 dollars. Data are projected for 1994 through 1995.

SOURCE: Health Care Financing Administration, Office of the Actuary, and the Congressional Budget Office for projections. Population estimates and projections from the Social Security Administration.

These expenditures consistently have grown faster than real per capita GDP in every year except 1984 and 1994.

Real per capita health expenditures are influenced by many factors. Advances in medical technology often have led to lower costs per unit of service. Nevertheless, they have contributed to the overall increase in spending by expanding the range of conditions that can benefit from medical intervention. Treatment protocols have improved significantly, becoming more effective, less invasive, and more acceptable to patients. This has heightened patients' and physicians' demands for care. To meet this demand, hospitals and other institutional providers have had strong incentives to expand access to new technologies, regardless of the cost.

Private insurance and government programs also have contributed to rising real per capita expenditures. The infusion of revenues from third-party payers financed the adoption of medical advances and the growth in service capacity. Insurers' payment policies, until recently dominated by cost-based reimbursement and fee-for-service payment methods, gave providers incentives to furnish more services to more people without fully considering the cost. Similarly, insured individuals often are insensitive to price and demand more services because they do not pay fully or directly for the cost of their care.

To a much lesser extent, the growth in real per capita expenditures has been influenced by gradual shifts in the demographic composition of the population. The subgroup of people aged 85 and older—those who use about three times more health care per person than younger cohorts—is growing faster than the rest of the population.

As with aggregate spending, the rate of growth in real per capita expenditures has declined recently owing to lower health industry-specific price inflation and smaller increases in service intensity. Given current trends, slower growth is expected to continue through 1995.

Spending by Payment Source

Federal, state, and local governments spent $387.8 billion on health care in 1993 (see Table 1-2). Medicare expenditures reached $154.2 billion—a fourfold increase since 1980. Similarly, Medicaid program outlays were over four times as much in 1993 as they were in 1980. Spending from private sources grew to $496.4 billion in 1993. Health insurance accounted for more than half of private expenditures ($296.1 billion), and individuals added $157.5 billion in out-of-pocket spending.

Before Medicare and Medicaid were implemented in 1966, private health insurance, out-of-pocket payments, and other private funds accounted for 75 percent of total health care spending.[6] By 1967, private payments dropped to 63 percent of total spending.[7] Throughout the 1970s, the share of aggregate expenditures represented by private sources declined gradually, reaching 58 percent in 1980 (see Table 1-3). After a slight increase during the 1980s, the portion of total spending accounted for by the private sector dropped from 59 percent in 1990 to an all-time low of 56 percent in 1993.

Table 1-2. National Health Spending, by Payment Source, Selected Years (In Billions)

Payment Source	1980	1985	1990	1993
Total	$251.1	$434.5	$696.6	$884.2
Medicare	37.5	72.2	112.1	154.2
Medicaid	26.1	41.3	75.4	117.9
Other government programs[a]	41.6	61.6	99.0	115.7
Private	145.8	259.4	410.0	496.4
Health insurance[b]	72.1	139.8	237.0	296.1
Out of pocket[c]	61.3	98.8	138.3	157.5
Other[d]	12.4	20.8	34.8	42.8

Note: Columns may not sum to total due to rounding.

[a] Includes Department of Defense, Department of Veterans Affairs, Public Health Service, Federal research, Federal and state and local workers' compensation, subsidies to hospitals, and public health activities.

[b] Includes premiums paid by employers or unions, employees' share of employer- or union-sponsored premiums, and premiums paid by people with individual policies.

[c] Includes all payments (other than premiums) by individuals, including deductibles and copayments required by private insurers and public programs when not covered by supplemental insurance.

[d] Includes industrial in-plant health services, provider non-patient revenues, private donations, and privately financed construction.

SOURCE: Health Care Financing Administration, Office of the Actuary.

Table 1-3. Share of National Health Spending, by Payment Source, Selected Years

Payment Source	1980	1985	1990	1993
Medicare	15.0%	16.6%	16.1%	17.4%
Medicaid	10.4	9.5	10.8	13.3
Other government programs[a]	16.6	14.2	14.2	13.1
Private	58.1	59.7	58.9	56.1
Health insurance[b]	28.7	32.2	34.0	33.5
Out of pocket	24.4	22.7	19.9	17.8
Other[c]	4.9	4.8	5.0	4.8

Note: Columns may not sum to 100 due to rounding.

[a] Includes Department of Defense, Department of Veterans Affairs, Public Health Service, Federal research, Federal and state and local workers' compensation, subsidies to hospitals, and public health activities.

[b] Includes premiums paid by employers or unions, employees' share of employer- or union-sponsored premiums, and premiums paid by people with individual policies.

[c] Includes all payments (other than premiums) by individuals, including deductibles and copayments required by private insurers and public programs when not covered by supplemental insurance.

[d] Includes industrial in-plant health services, provider non-patient revenues, private donations, and privately financed construction.

SOURCE: Health Care Financing Administration, Office of the Actuary.

The movement from private to public financing of health care has been accompanied by changes in the distribution of private spending. The relative importance of out-of-pocket expenditures diminished as private health insurance payments grew faster than total spending between 1980 and 1990 (see Table 1-4). The shares of both private health insurance and out-of-pocket expenditures declined after 1990, however, as their rates of increase fell. The expansion of managed care, which has slowed the growth in expenditures for some payers and has limited enrollee cost-sharing requirements, may have contributed to these trends.

The share of total spending attributable to public sources is increasing because of the rapid rise in Medicare and Medicaid spending. Medicare expenditure growth, which slowed after implementation of the prospective payment system (PPS) for hospital inpatient services in 1983, accelerated from 1990 to 1993. This was primarily due to the increase in the Medicare population and to beneficiaries' greater use of ambulatory and post-acute services. By contrast, Medicaid expenditures climbed rapidly from 1980 to 1993. Expanding enrollment and hospital payment adjustments intended for facilities that serve a disproportionate

Table 1-4. Change in Real National Health Spending, by Payment Source, 1980-1993 (In Percent)

Payment Source	1980-1985	1985-1990	1990-1993
Total	5.8%	5.7%	4.7%
Medicare	8.0	5.0	7.5
Medicaid	3.9	8.5	12.2
Other government programs[a]	2.5	5.8	1.8
Private	6.4	5.4	3.0
Health insurance[b]	8.2	6.9	4.1
Out of pocket[c]	4.3	3.5	1.0
Other[d]	5.2	6.6	3.6

Note: Average annual rate of change in national health spending adjusted by a variant of the consumer price index for all urban consumers (CPI-U-X1).

[a] Includes Department of Defense, Department of Veterans Affairs, Public Health Service, Federal research, Federal and state and local workers' compensation, subsidies to hospitals, and public health activities.

[b] Includes premiums paid by employers or unions, employees' share of employer- or union-sponsored premiums, and premiums paid by people with individual policies.

[c] Includes all payments (other than premiums) by individuals, including deductibles and copayments required by private insurers and public programs when not covered by supplemental insurance.

[d] Includes industrial in-plant health services, provider non-patient revenues, private donations, and privately financed construction.

SOURCE: Health Care Financing Administration, Office of the Actuary.

share of low-income patients primarily account for this growth.[8]

Sustained growth in Medicare spending has put tremendous pressure on the solvency of the Federal Hospital Insurance (HI) Trust Fund. This fund, which pays for acute and post-acute inpatient care and other related services, is financed by taxes on earnings paid by employers, employees, and self-employed individuals. Because of rapid growth in spending for post-acute care, the fund's disbursements are expected to exceed its income during 1996, after which its assets will decline. The Medicare Board of Trustees currently projects that the HI Trust Fund will be depleted by 2002.[9] Although the year of the fund's exhaustion has been pushed back with each annual projection, there is cause for concern.

Moreover, the number of workers contributing to the trust fund relative to the number of HI enrollees is declining. This decline will accelerate sharply after 2011, when members of the baby boom generation retire from the work force and begin to receive Medicare benefits. Consequently, the imbalance between trust fund income and outlays will begin to worsen rapidly early in the next century.

Spending by Sector

The largest amount of total national health spending has been and continues to be devoted to hospital services. Hospitals received $326.6 billion in 1993, up from $102.7 billion in 1980 (see Table 1-5). The proportion of total spending going to hospitals is declining, however.

In response to rapidly rising health care expenditures through the 1970s and 1980s, government programs, followed by some private payers, took steps to curtail their spending. Because hospital inpatient care is by far the most expensive type of care, cost-containment efforts initially were aimed at controlling the growth in spending for acute inpatient services. These efforts were feasible because inpatient care generally is well-documented, and because an episode of inpatient care is relatively easy to define.

At the same time, advances in technology and medical practice began to shift the delivery of care to presumably less costly settings. Together, these changes led to a substantial decline in the share of total expenditures attributed to hospitals, which dropped from 40.9 percent in 1980 to 36.9 percent in 1993 (see Table 1-6).

Table 1-5. National Health Spending, by Sector, Selected Years (In Billions)

Sector	1980	1985	1990	1993
Total	$251.1	$434.5	$696.6	$884.2
Hospitals	102.7	168.2	256.5	326.6
Inpatient[a]	69.1	113.1	165.5	203.2
Outpatient[a]	10.4	23.0	51.2	77.2
Other[b]	23.1	32.2	39.8	46.1
Nursing facilities	20.5	34.9	54.8	69.6
Home health agencies	1.9	4.9	11.1	20.8
Physicians	45.2	83.6	140.5	171.2
Other personal health care[c]	49.8	88.8	149.5	194.4
Other spending[d]	31.0	54.0	84.2	101.7

Note: Columns may not sum to total due to rounding.

[a] Includes patient care spending in community hospitals.

[b] Includes patient care spending in Federal and noncommunity hospitals, and non-patient care revenues in all hospitals.

[c] Includes dental services, other professional services, drugs and other medical non-durables, vision products, and other medical durables.

[d] Includes research, construction, public health activity, administrative costs of health insurers, and net cost of insurance.

SOURCE: Health Care Financing Administration, Office of the Actuary.

Table 1-6. Share of National Health Spending, by Sector, Selected Years (In Percent)

Sector	1980	1985	1990	1993
Hospitals	40.9%	38.7%	36.8%	36.9%
Inpatient[a]	27.5	26.0	23.8	23.0
Outpatient[a]	4.1	5.3	7.4	8.7
Other[b]	9.2	7.4	5.7	5.2
Nursing facilities	8.2	8.0	7.9	7.9
Home health agencies	0.8	1.1	1.6	2.4
Physicians	18.0	19.2	20.2	19.4
Other personal health care[c]	19.8	20.5	21.5	22.0
Other spending[d]	12.3	12.4	12.1	11.5

Note: Columns may not sum to 100 due to rounding.

[a] Includes patient care spending in community hospitals.

[b] Includes patient care spending in Federal and noncommunity hospitals, and non-patient care revenues in all hospitals.

[c] Includes dental services, other professional services, drugs and other medical non-durables, vision products, and other medical durables.

[d] Includes research, construction, public health activity, administrative costs of health insurers, and net cost of insurance.

SOURCE: Health Care Financing Administration, Office of the Actuary.

Changes in practice patterns and in the nature of services provided also have resulted in shifts within the hospital industry. Per capita admissions and length of stay are falling while the use of outpatient services is rising rapidly. Consequently, spending on hospital inpatient services dropped from 27.5 percent of the total in 1980 to 23.0 percent in 1993. Expenditures for hospital outpatient services, however, more than doubled from 4.1 percent of total spending to 8.7 percent. Moreover, real outpatient expenditure growth from 1980 to 1993 was almost three times faster than that for inpatient spending (see Table 1-7).

Spending for non-hospital care has grown substantially, owing to the rising number and types of services provided by skilled nursing facilities and home health agencies, and in physicians' offices and other ambulatory settings. This reflects both the substitution of these services for acute inpatient care and the absolute growth in total services furnished. Although there have been year-to-year variations, real spending for nursing facilities and physician services grew at about the same average annual rate as real aggregate health spending from 1980 to 1993. By contrast, real home health care expenditure growth averaged 15.2 percent per year from 1980 to 1993—nearly three times faster than that for total spending. Consequently, home health care accounted for 2.4 percent of total expenditures in 1993, up from 0.8 percent in 1980.

Table 1-7. Change in Real National Health Spending, by Sector, 1980-1993 (In Percent)

Sector	1980-1985	1985-1990	1990-1993
Total	5.8%	5.7%	4.7%
Hospitals	4.6	4.7	4.8
Inpatient[a]	4.6	3.8	3.5
Outpatient[a]	11.0	12.9	10.9
Other[b]	1.3	0.4	1.6
Nursing facilities	5.4	5.3	4.8
Home health agencies	14.9	13.1	19.1
Physicians	7.2	6.7	3.3
Other personal health care[c]	6.4	6.7	5.5
Other spending[d]	5.9	5.1	3.0

Note: Average annual rate of change in national health spending adjusted by a variant of the consumer price index for all urban consumers (CPI-U-X1).

[a] Includes patient care spending in community hospitals.

[b] Includes patient care spending in Federal and noncommunity hospitals, and non-patient care revenues in all hospitals.

[c] Includes dental services, other professional services, drugs and other medical non-durables, vision products, and other medical durables.

[d] Includes research, construction, public health activity, administrative costs of health insurers, and net cost of insurance.

SOURCE: Health Care Financing Administration, Office of the Actuary.

THE IMPACT OF COST CONTAINMENT

As noted above, the spread of private insurance and government programs and the methods insurers use to pay providers contributed to the rise in aggregate health care expenditures over time. Fee-for-service and cost-based reimbursement mechanisms, which determine payments according to the quantity of care delivered, give providers incentives to furnish more services (and more complex ones), even if the expected benefit to the patient is small. During the 1980s, many public and private sector cost-containment measures were designed to change these incentives by emphasizing risk-sharing arrangements between payers and providers.

Medicare's PPS, for example, changed the basis of payments for hospital inpatient services from retrospective costs to a prospectively determined amount per discharge. Therefore, hospitals now bear the risk that payments may not fully cover their costs for each case. This was designed to give providers the incentive to improve efficiency and reduce the intensity of services furnished during a hospital stay.

PPS slowed the rate of increase in Medicare hospital expenditures because costs were no longer the basis of payments. Its long-run effect on overall health spending and hospital cost growth, however, was not as intended. Payment constraints on hospital inpatient services spurred substantial growth in spending for services provided in other settings not under cost-containment pressure. Furthermore, hospitals did not have to reduce costs significantly because they were able to generate additional income from privately insured patients and other sources.

Cross subsidization among payers is not new. Hospitals have always had to raise funds to cover their uncompensated care losses, which account for roughly 5 percent of their total costs, on average. Historically, hospitals received money from state and local governments and private donations to

subsidize charity care and bad debt. In addition, they offset these losses with profits made by charging privately insured patients more than the cost of their care, a practice known as cost shifting.

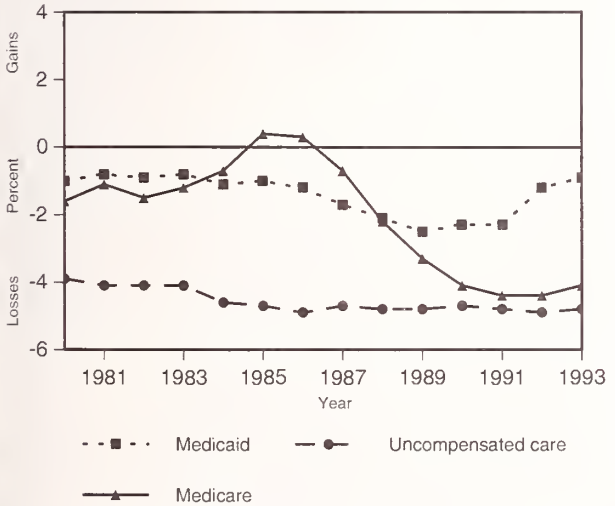
Losses incurred from treating Medicare patients became a significant concern in the late 1980s. At the implementation of PPS, hospital cost increases declined, while aggregate Medicare inpatient operating payments were set higher than historical costs. As a result, hospitals generally experienced net gains from treating Medicare patients (see Figure 1-2). Later, hospital cost increases returned to their pre-PPS levels, outpacing the growth in Medicare payments. Consequently, hospitals experienced rising losses from Medicare through 1991. Since that time, however, hospital cost increases have slowed again and Medicare losses have remained relatively constant.

Hospitals' aggregate Medicaid losses also rose in the mid-1980s, owing to expanding enrollment and payment constraints in at least some states. In the early 1990s, though, many state Medicaid programs began to use provider taxes and donations to attract more Federal payments to support substantially larger payments to hospitals designated as serving a disproportionate share of low-income patients. As a result, hospitals' aggregate Medicaid losses leveled off in 1990 and 1991, and declined in 1992 and 1993.

In the mid-1980s as losses from Medicare and Medicaid began to grow and production costs continued to rise, cost shifting increased (see Table 1-8). Before PPS was implemented, aggregate payments from private payers rose from 112 percent of the cost of treating privately insured patients in 1980 to 116 percent in 1983. They remained at this level through 1986.

By 1992, however, Medicare's payments covered only 89 percent of what hospitals spent to treat its patient load, and Medicaid payments, after falling to 76 percent of costs in 1989, were at 91 percent of costs. As a result, private payments climbed to 131 percent of costs in 1992. Although individual institutions cost shift to varying degrees, hospitals

Figure 1-2. Losses as a Percentage of Total Hospital Costs for Medicaid, Medicare, and Uncompensated Care, 1980-1993



Note: For each payment source, losses are the difference between the cost of providing care and the payment received. Operating subsidies from state and local governments are considered payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Due to reporting inconsistencies related to Medicaid disproportionate share hospital payments and provider-specific taxes, there are significant margins of error for the numbers related to all payers in 1992 and 1993.

SOURCE: ProPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

Table 1-8. Hospital Payment to Cost Ratios for Medicare, Medicaid, and Private Payers, 1980-1993

	Payment to Cost Ratio		
Year	Medicare	Medicaid	Private
1980	0.96	0.91	1.12
1981	0.97	0.93	1.12
1982	0.96	0.91	1.14
1983	0.97	0.92	1.16
1984	0.98	0.88	1.16
1985	1.01	0.90	1.16
1986	1.01	0.88	1.16
1987	0.98	0.83	1.20
1988	0.94	0.80	1.22
1989	0.91	0.76	1.22
1990	0.89	0.80	1.27
1991	0.88	0.82	1.30
1992	0.89	0.91	1.31
1993	0.89	0.93	1.29

Note: Payments and costs include both inpatient and outpatient services. These ratios cannot be used to compare payment levels, because both the mix of services and the cost per unit of service vary across payers. They do, however, indicate the relative degree to which payments from each payer cover the costs of treating its patients. Due to reporting inconsistencies related to Medicaid disproportionate share payments and provider-specific taxes, there are significant margins of error for the numbers related to all payers in 1992 and 1993.

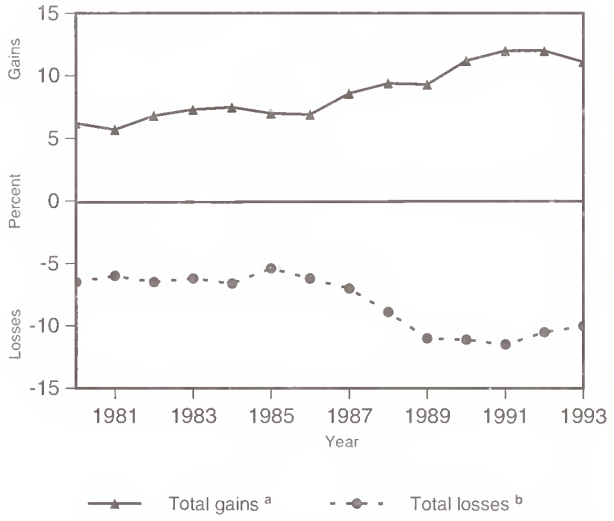
SOURCE: ProPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

in aggregate have been able to generate substantial gains from the private sector. When these gains are combined with direct subsidies from state and local governments, they nearly mirror hospitals' total losses from Medicare, Medicaid, and uncompensated care (see Figure 1-3).[10] Both total gains and total losses increased from close to 7 percent of total expenses before PPS to about 12 percent in 1992.

In the past, private insurers were able to pay hospitals more than the costs of treating their enrollees because they could recover their expenses by raising premium rates to employers and individuals. Businesses, in turn, were able to pass on rising insurance costs through higher prices to consumers and smaller wage increases for employees. Over time, however, cost shifting has placed a heavier burden on some payers. With overall health care spending continuing to rise, a number of private insurers began to negotiate discounts with providers to control their growing expenditures. As fewer insurers paid full charges, hospitals had to increase their prices even further to elicit the same amount of additional payments. As a result, hospital charges rose sharply beginning in 1985 (see Figure 1-4).

As more of the burden of higher expenditures has fallen on a smaller number of private insurers, they have become less able to pass it on to businesses and individuals. Firms are increasingly unwilling to pay higher premiums and are pressuring insurers to lower their costs. In response, insurers are more aggressively adopting utilization review and imposing stricter payment constraints to transfer more of the financial risk associated with higher expenditures to providers. The latest data indicate that these initiatives seem to be working. Private payers' payments fell from 131 percent of costs in 1992 to 129 percent in 1993, and hospital cost increases have slowed in recent years. (See Chapter 2.)

Figure 1-3. Total Gains and Total Losses as a Percentage of Hospital Costs, 1980-1993



Note: Gains and losses are the difference between the cost of providing care and the payment received. Operating subsidies from state and local governments are considered payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Excludes non-patient care income. Due to inconsistencies related to Medicaid disproportionate share hospital payments and provider-specific taxes, there are significant margins of error for the numbers related to all payers in 1992 and 1993.

[a] From private payers and operating subsidies above uncompensated care costs.

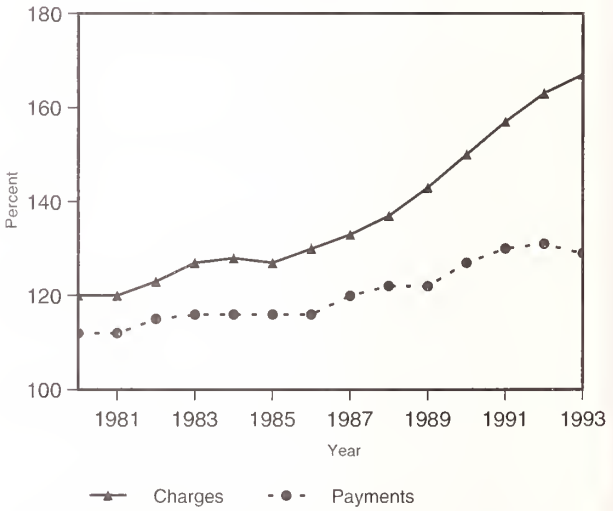
[b] From Medicare, Medicaid, other government payers, and uncompensated care.

SOURCE: ProPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

CONTROLLING OVERALL SPENDING

Cost-containment initiatives by Medicare (and other payers) during the 1980s, which were aimed

Figure 1-4. Private Payer Charges and Payments as a Percentage of Private Payer Costs, 1980-1993



Note: Due to reporting inconsistencies related to Medicaid disproportionate share hospital payments and provider-specific taxes, there are significant margins of error for the numbers related to all payers in 1992 and 1993.

SOURCE: ProPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

at certain settings, were successful in curtailing the payer's spending growth in those areas. Evidence indicates, however, that the health care system can quickly respond to payment constraints in one area by developing additional capacity in others. Moreover, efforts by some payers to control their own spending had little effect on aggregate costs, because many private sector payers continued to pay ever-higher prices. As a result, total health care spending continued to escalate.

Recently, however, many private sector purchasers have become more aggressive in limiting their health insurance premiums. Thus, both private sector and public purchasers are turning to organizations that are attempting to implement comprehensive approaches to controlling costs by managing the entire spectrum of services for which they pay.

Changing Mix of Private Insurance

Most of the nonelderly population is insured though employment-based group policies, so the rising cost of health care has been felt by employers through premium increases. These soaring premiums have contributed to a reexamination of health insurance coverage across large and small firms. One strategy has been to shift employees from traditional indemnity insurance into managed care plans, whose premiums are, on average, 9 percent to 12 percent lower.[11]

In 1988, 73 percent of insured individuals with private health insurance had traditional indemnity insurance (see Table 1-9).[12] By 1993, however, the market share of indemnity plans had fallen to 33 percent due to changes in the products offered by insurers and in the plans offered by employers or chosen by employees. Preferred provider organizations (PPOs), which preserve fee-for-service payments and limit enrollee choice of providers, accounted for most of this shift. PPOs' share of the private insurance market grew from 10 percent in 1988 to 43 percent in 1993, while that for health maintenance organizations (HMOs) rose from 17 percent to 22 percent over the same period. New products, such as point-of-service plans, which combine the gatekeeper function typical of HMOs with partial coverage of out-of-network services, began to gain market share as well.

Table 1-9. Privately Insured, by Type of Plan, 1988 and 1993 (In Percent)

Type of Plan	1988	1993
Indemnity	72.6%	33.3%
HMO	17.0	22.4
PPO	10.1	43.0
Point of service	0.3	1.3

Note: HMO = health maintenance organization. PPO = preferred provider organization.

SOURCE: Employee Benefit Research Institute, *Sources of Health Insurance and Characteristics of the Uninsured*, February 1995.

Indemnity insurers also have responded to demands for lower premium growth by adopting some managed care techniques. By 1990, for example, 95 percent of these insurers had implemented utilization review procedures. Moreover, many indemnity plans converted to managed care plans (usually PPOs) by giving enrollees financial incentives to use certain providers. Typical incentives for enrollees to use participating providers include lower copayments and payment for benefits like routine physical examinations and other preventive care services that would not otherwise be covered. To control its expenditures, the insurer generally negotiates contracts with participating providers that limit their payments through discounts or other means.

Most employers providing health insurance continue to offer indemnity plans to their employees, although an increasing number of firms are dropping this option.[13] Among firms offering health insurance in 1993, 63 percent of those with at least 500 employees and 57 percent with 10 to 499 workers offered indemnity insurance. In 1994, these figures fell to 60 percent and 46 percent, respectively, for large and small firms. About 37 percent of large firms and 4 percent of small ones offered both indemnity insurance and managed care options in 1993. In addition, employers may be using financial incentives to encourage employees to enroll in managed care.

Workers have always paid indirectly for health insurance premiums through forgone wages and lower wage increases. From 1970 to 1991, the real cost per employee of health benefits paid by employers rose 234 percent, while the cumulative increase in real wages was only 0.4 percent.[14]

More recently, however, employers have responded to rising premiums by increasing the share of the premium paid directly by employees and by raising deductibles and copayment requirements.[15] As workers directly contribute a larger share of the cost of health insurance, they are more likely to reevaluate their health insurance choices. Among large firms offering indemnity insurance (including companies that also provide a managed care option), those requiring direct employee contributions to the premium for individual coverage rose from 59 percent in 1992 to 67 percent in 1993. In addition, among firms requiring employee contributions, the average amount increased from 19 percent of an individual's premium in 1992 to 24 percent in 1993 (see Table 1-10).

Employers that provide indemnity insurance are the least likely to mandate that employees share premium costs. In 1993, 67 percent of large firms offering indemnity insurance required this. However, 74 percent of companies offering HMOs and 77 percent of those offering PPOs required such contributions (see Table 1-11). Employers offering managed care plans also are likely to have employees pay more of the premium. The worker's average share of the monthly premium for a family policy in firms that require cost sharing is $125 for an indemnity plan, but more than $140 for a managed care option.[16] Thus, businesses that have responded to rising premiums by offering managed care plans also appear to be encouraging their employees to reconsider their insurance choices by raising employees' premium contributions.

The shift to managed care has contributed to a slowing in the rate of increase in employers' health benefit costs (see Table 1-12). Changes in covered benefits may also have contributed to slower premium growth. Health costs per employee rose at double-digit rates from 1987 through 1992, before slowing to 8 percent in 1992. The average cost per worker actually fell for large firms in 1994, because the share of employees enrolled in higher-cost indemnity plans declined to 34 percent from 43 percent in 1993.

Shifting employees from indemnity plans to lower-cost managed care plans offers employers a one-time savings and provides a lower base for future premium increases. However, the rate of increase in premiums will decline only if managed care plans can sustain a rate of growth in costs below that of indemnity plans. In 1994, premium costs rose more slowly in managed care plans. For

Table 1-10. Employee Contribution to Indemnity Health Insurance Premiums, 1992 and 1993 (In Percent)

Employee Contribution	1992	1993
Large firms requiring contribution	59%	67%
Average contribution for individual coverage (percent of premium)	19	24

Note: Employee contributions are for large firms only (those with 500 or more workers).

SOURCE: A. Foster Higgins & Co., Inc., *Foster Higgins Health Care Benefits Survey*, 1993 and 1994.

Table 1-11. Employee Contribution to Health Insurance Premiums, by Type of Plan, 1993

Type of Plan	Large Firms Requiring Contribution (In Percent)	Average Contribution to Policy* Individual	Family
Indemnity	67%	$40	$125
HMO	74	42	146
PPO	77	46	142

Note: Employee contributions are for large firms only (those with 500 or more workers). HMO = health maintenance organization. PPO = preferred provider organization.

* Average for firms requiring contribution.

SOURCE: A. Foster Higgins & Co., Inc., *Foster Higgins Health Care Benefits Survey, 1994.*

Table 1-12. Employer-Based Health Insurance Cost, by Type of Plan, 1992-1994

Type of Plan	Average Cost Per Employee 1992	1993	1994	Percent Change 1993-1994
Indemnity	$3,628	$3,500	$3,850	10.0%
HMO	3,075	3,276	3,485	6.4
PPO	3,145	3,317	3,386	2.1
Point of service	—	3,266	3,609	10.5

Note: Cost is defined as total annual medical plan claims and administrative costs, excluding dental care, for active and retired employees and their dependents divided by the number of active covered employees. This excludes employer tax contributions and employee out-of-pocket costs. HMO = health maintenance organization. PPO = preferred provider organization.

SOURCE: A. Foster Higgins & Co., Inc., *Foster Higgins Health Care Benefits Survey*, 1992, 1993, and 1994.

all firms, the average cost per employee went up 10 percent in indemnity plans, but only 2 percent for PPOs and 6 percent for HMOs.

Medicaid

In June 1994, 7.6 million Medicaid recipients (about one-third of all Medicaid beneficiaries) were enrolled in managed care programs in 44 states and the District of Columbia.[17] This represents a 57 percent rise in the number of Medicaid managed care enrollees in one year. In addition, at least 19 states have applied to the Federal government for authority to enroll parts of their Medicaid populations in managed care programs.[18] Several states operate, or plan to establish, multiple programs—which often target different Medicaid populations.

In most states, Medicaid managed care programs generally are targeted at recipients in the Aid to Families with Dependent Children program and others who are not disabled or elderly. Medicaid managed care plans have been credited with a 5 percent to 15 percent reduction in costs for the enrolled populations. However, about 70 percent of Medicaid expenditures are for services provided to the disabled and elderly, who are rarely included in Medicaid managed care programs. Several pending waiver requests are for programs that would focus on disabled or frail elderly groups. (See Chapter 3.)

Medicare

Although Medicare has offered managed care options since 1972, only 8.7 percent of Medicare enrollees (3.2 million) were in managed care plans in March 1995.[19] Two million are in the fully capitated risk contracting program, while the rest are in managed care arrangements that cover some services on a fee-for-service or cost-reimbursement basis.

Unlike some private employers and Medicaid programs, Medicare does not require enrollees to join managed care plans nor does it mandate higher payments for those who do not. Nevertheless, at least 30 percent of Medicare enrollees in California, Hawaii, Nevada, and Oregon are in managed care plans. In these and other states where Medicare managed care participation is relatively high, HMO penetration of the nonelderly market tends to be widespread. Medicare enrollment in managed care plans has risen 50 percent since 1991 and can be expected to increase as managed care becomes the dominant form of insurance in the private sector.

DISTRIBUTING THE GROWING FINANCIAL BURDEN

Traditionally, most health care providers could rely on higher prices paid by indemnity insurers and on public subsidies to fund uncompensated care and other uncovered costs. Insurers generally could pass on rising costs by raising premiums, although they bore underwriting risk in the short term.[20] Employers and public payers directly faced the burden of higher health care spending. Employers responded by holding down wage increases and raising the price of goods and services. Greater spending by public programs was funded through higher taxes and premiums.

These methods of financing health care costs could be sustained as long as health care was a small part of the cost of doing business. However, from 1980 to 1993, health care costs for employees rose from 5.5 percent to 8.5 percent of firms' total payroll.[21] Including health care benefits for retirees, this proportion was 11.1 percent in 1993. Health care costs are consuming an increasing share of public spending as well. Medicare accounted for 5.4 percent of Federal outlays in 1980, and for 9.9 percent in 1994.[22] The share of state budgets consumed by Medicaid rose from about 9 percent to 19.4 percent during the same period.[23]

As health care has become an increasingly significant component of business costs, many firms believe they no longer can finance higher premiums through lower wage increases or higher prices. This has resulted in the expansion and redistribution of financial risk from employers to employees and throughout the entire health care system. It has also contributed to growth in the number of the uninsured. As a result, the traditional financing methods are showing signs of severe strain.

Changing Nature of Financial Risk

Many companies are no longer willing to unquestioningly fund rising health costs. As a result, insurers cannot expect that higher spending can be passed along to employers and workers through higher premiums. Thus, insurers must deal with the challenge of managing the price and quantity of the

services provided to their enrollees. Insurers are responding by shifting financial risk to providers.

Providers have always had to find ways to fund the cost of care furnished to patients who cannot or will not pay. Moreover, certain providers have traditionally produced socially desirable outputs—such as medical research and training of physicians and other practitioners—that were financed with revenue from insured patients. Thus far, the industry as a whole has successfully generated sufficient revenue from private payers to fund these missions. However, the need and ability to generate such revenue varies widely across hospitals and other types of providers.

Managed care plans are negotiating lower payment rates and attempting to control utilization. Thus, there will be fewer opportunities for cost shifting as managed care plans capture greater market share and the number of people enrolled in indemnity plans declines. Further, generating additional revenue by raising prices for a declining number of charge-paying patients is not a viable strategy: The amount that providers will need to collect from each remaining charge-paying patient will escalate, thereby increasing the difference in the premiums that managed care plans and indemnity insurers must charge. To survive in the long run, therefore, providers must respond to the demand for lower prices by cutting their costs, not just by raising prices to charge-paying patients. Some providers will also seek to reduce the amount of uncompensated care they give. As a result, the nature of the financial risk faced by providers is changing from whether they can collect sufficient revenue to cover their costs to whether they can reduce their costs below their revenue.

The need to lower costs is reinforced by changes in the methods that insurers use to pay providers. Many managed care plans continue to pay on a fee-for-service basis, although often with deep discounts. Increasingly, though, insurers are changing the basis of payment to include a larger bundle of services, such as all services provided during an inpatient day (per diem), or necessary to treat a case. Some are negotiating capitated payments, which cover all services required by a group of enrollees. As the basis of payment includes larger bundles of services, providers incur a risk that payments will not cover the full cost of the resources used to treat the patient or the group.

For employers as well as workers and their dependents, there is a growing possibility that health insurance may become unaffordable. Some employers are responding to rising premiums by dropping coverage. Others are requiring employees to spend more to obtain coverage. Employers, insurers, and providers are all developing methods of managing care and controlling costs. (See Chapter 3.) Many of these methods shift some financial risk to the individual. For example, people may encounter higher cost-sharing requirements for covered services or be required to pay more for services if they choose to go outside of the plan. Patients may also find that certain services are no longer covered at all, or that coverage ends after a limited amount of the service is used.

The Growing Uninsured Population

The growth of managed care is contributing to rapid change in the financing and delivery of health care services, and holds the potential for reducing the cost of care for many insured people. At any point during a year, however, many people experience lapses in health insurance coverage, leaving them without financial protection against the high cost of a serious illness. Thus, the burden of health care costs is becoming more concentrated as payments for some insured individuals are constrained and as the uninsured population grows.

Nearly everyone 65 and older is entitled to benefits under the Medicare program. Therefore, lapses in health insurance coverage occur almost entirely among people under 65. Because most of those in this age group obtain health insurance through the workplace, coverage (or the lack of it) is closely associated with employment status and whether the firm offers insurance. Many employers do not offer health insurance to some or all of their workers. Consequently, the uninsured population also includes substantial numbers of workers and their dependents.

In 1994, 23 million of the uninsured were workers; another 9 million were children of workers. Uninsured workers tended to be employed less than full time or to work for small firms. Nearly all large employers offered health insurance to full-time employees, but 40 percent did not provide health insurance coverage to any part-time workers.[24] As a result, 12 percent of workers (5 million) in large firms were uninsured, most of whom were part-

time or part-year workers. About 29 percent of the self-employed and workers in firms with fewer than 25 employees (11 million) were uninsured.

In small firms, a high proportion of employees are uninsured because many of these businesses do not offer health insurance. In 1993, for instance, only 51 percent of companies with fewer than 50 employees provided health insurance.[25] The smallest were the least likely to do so: 44 percent of firms having fewer than 10 employees and 85 percent with 25 to 49 employees offered health insurance.

The proportion of small businesses providing health insurance benefits has varied substantially in recent years, falling from 41 percent in 1989 to 34 percent in 1991, before rising to 51 percent in 1993. Although the recent trend has been for more small firms to offer health insurance, many have also dropped coverage. Of those that did not offer health insurance in 1993, 10 percent had dropped coverage since 1990, mostly because of substantially higher premiums.

According to the Current Population Survey, the number and proportion of persons without insurance has been increasing for more than a decade.[26] In 1980, when the survey first measured health insurance coverage, 12 percent of the under-65 population (24 million people) lacked health insurance.[27] Since 1989, the number of the uninsured has grown steadily, from 34 million to 41 million in 1994 (see Table 1-13).

Table 1-13. Nonelderly Population Without Health Insurance, 1990-1994

Year	Number of Uninsured (In Millions)	Percentage of Under 65 Population
1990	34.4	16.1%
1991	35.7	16.6
1992	36.3	16.6
1993	39.8	17.8
1994	40.9	18.1

Note: Approximately 300,000 to 400,000 (1.0 percent to 1.2 percent) of people 65 and older lack health insurance.

SOURCE: Employee Benefit Research Institute, *Sources of Health Insurance and Characteristics of the Uninsured*, 1995.

CONCLUSIONS AND CHALLENGES

The health care financing and delivery system is rapidly being transformed. Many health care purchasers and payers are replacing the fee-for-service payment system, which encouraged growth in the price and quantity of services, with incentives to provide care more efficiently. Use of hospital inpatient services is declining on a per capita basis, while more services are being provided in ambulatory and post-acute settings. Providers are responding to these changes by establishing new relationships to secure their market position and collectively manage risk. This transformation has already contributed to a significant slowing in the rate of increase in national health care expenditures, and recent evidence indicates that some historic trends are changing. Some payers have even been able to reduce their spending for health care services.

Much of the transformation in the health care system is the result of the expansion and evolution of cost-containment efforts by private and public payers. Early initiatives tended to focus on services provided in a single setting. Today's more comprehensive approaches attempt to manage a broader spectrum of the services provided to beneficiaries, and to negotiate lower prices across a wide range of settings. These activities have the potential to make the health care system more efficient and to control the rise in health care spending. At the same time, the health care system faces numerous problems and unmet needs.

The challenges facing the American health care system in this rapidly evolving environment include how to achieve real cost containment while continuing to meet the broader health care needs of our society. Changes in the financing and delivery of health care services are beginning to control the number of services provided. However, there is an ongoing need to make certain that efforts to deliver care more efficiently do not also reduce access to appropriate care, particularly for the most vulnerable members of society.

The Medicare program has pioneered many cost-containment efforts and continues to implement policies designed both to encourage efficiency and to support broader social goals. Private payers have focused recently on cost containment and have had considerable success in slowing spending growth. Public and private payers, providers, and consumers must act together to preserve these gains and to ensure that costs, access, and quality issues are considered together so that future changes in health care policy will be effective.

Notes to Chapter 1

1. Katharine R. Levit and others, "National Health Expenditures. 1993," *Health Care Financing Review* 16(1):247-94, Fall 1994.

2. National health expenditure projections from the Congressional Budget Office.

3. The growth in national health expenditures dipped in the early-1970s as a result of the Nixon Administration's Economic Stabilization Program and again in the late-1970s as a result of voluntary hospital cost controls.

4. National health expenditures comprise personal spending on health services and supplies obtained from hospitals, physicians, nursing homes, home health agencies, dentists, and other professionals, as well as drugs, medical equipment, vision products, and other miscellaneous items. The administrative expenses of private and public insurers, government public health spending, and expenses related to research and construction also are included. Data on national health expenditures, with breakdowns by type of provider and source of funds, are compiled by the Health Care Financing Administration.

5. ProPAC analysis of historical health expenditure data from the Health Care Financing Administration, Office of the Actuary; and GDP estimates from the Congressional Budget Office.

6. The remaining 25 percent comprised government spending on health care by the Department of Defense, the Department of Veterans Affairs, and the Public Health Service; and for Federal research, Federal and state and local workers' compensation, subsidies to hospitals, and other public health activities.

7. Health Care Financing Administration, Office of the Actuary.

8. John Holahan, David Liska, and Karen Obermaier, *Medicaid Expenditures and Beneficiary Trends, 1988-1993* (Washington, DC: Kaiser Commission on the Future of Medicaid, 1994).

9. The Board of Trustees, Federal Hospital Insurance Trust Fund, *1995 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund,* April 1995.

10. A hospital's ability to cost shift depends to a great extent on what proportion of its patients are privately insured. See Chapter 2 for further discussion.

11. A. Foster Higgins & Co., Inc., *National Survey of Employer-Sponsored Health Plans, 1994* (Princeton, NJ: A. Foster Higgins & Co., Inc., 1995).

12. Employee Benefit Research Institute, *Sources of Health Insurance and Characteristics of the Uninsured: Analysis of the March 1994 Current Population Survey*, (Washington, DC: EBRI, 1995).

13. A. Foster Higgins & Co., Inc., *National Survey of Employer-Sponsored Health Plans, 1994.*

14. Health Care Financing Administration, Office of the Actuary.

15. A. Foster Higgins & Co., Inc., *National Survey of Employer-Sponsored Health Plans, 1994.*

16. The cost of a family policy is for insurance covering the worker, the worker's spouse, and two children.

17. Lewin-VHI, *States as Payers: Managed Care for Medicaid Populations* (Washington, DC: National Institute for Health Care Management, 1995).

18. The Secretary of Health and Human Services must approve a waiver of Section 1115 or Section 1915(b) of the Social Security Act before a state Medicaid program may establish a program, including a managed care program, that limits a beneficiary's choice of providers (Section 1115), or changes the benefits or populations that will be covered with Federal funds (Section 1915[b]).

19. Health Care Financing Administration, Office of Managed Care.

20. Underwriting risk is the potential for financial loss arising from claims for an insured group that exceed the expected level.

21. U.S. Chamber of Commerce Research Center, *Employee Benefits: Survey Data from Benefit Year 1993* (Washington. DC: U.S. Chamber of Commerce, 1994).

22. Council of Economic Advisers, *Economic Report of the President, 1995* (Washington, DC: U.S. Government Printing Office, 1995) 367.

23. National Association of State Budget Officers, *1994 State Expenditure Report*, (Washington, DC: NASBO, 1995).

24. A. Foster Higgins & Co., Inc. *National Survey of Employer-Sponsored Health Plans, 1994.*

25. Michael A. Morissey, Gail A. Jensen, and Robert J. Morlock, "Small Employers and the Health Insurance Market," *Health Affairs* 13(4):149-61, Winter 1994.

26. Since 1980, annual data on the prevalence of health insurance and the primary source of coverage have been collected in March through the Current Population Survey conducted by the Bureau of the Census. The survey asks about health insurance coverage during the entire previous year. However, based on comparison with other health insurance status surveys, many analysts believe that the answers reflect coverage status on the day the survey is administered. This analysis presents Current Population Survey data as measuring current health insurance status.

27. U.S. Congress, Congressional Budget Office, October 1993.

Chapter 2

Hospital Payments, Costs, and Financial Condition

Chapter 2

Hospital Payments, Costs, and Financial Condition

Spending on hospitals—the largest segment of the health care industry—consumes 37 percent of national health care dollars. In 1993, payments to hospitals reached $326.6 billion, over twice the amount in 1983 (see Table 2-1). More than half of this comes from public sources, primarily Medicare. Private health insurance accounts for over a third of all payments to hospitals, while out-of-pocket payments constitute just 3 percent.

Hospitals have been a major target for cost-containment measures, not only because of their large share of health care spending, but also because compared with other providers, the institutions themselves and the services they furnish are better understood and documented. Consequently, it is not surprising that numerous activities related to constraining health care spending growth have focused on hospital costs. The Federal government was at the forefront of these efforts with the enactment in 1983 of Medicare's prospective payment system (PPS) for hospital inpatient care. Though Medicare spending growth slowed following implementation of PPS, hospital cost growth soon returned to its previous high rate of increase.

In recent years, private payers have followed Medicare's lead in efforts to reduce expenditures for hospital care. In addition, Medicare and other payers have made new efforts to slow the growth in

Table 2-1. Hospital Payments by Source, 1983 and 1993

Payment Source	1983 Amount (In Billions)	1983 Share of Total (In Percent)	1993 Amount (In Billions)	1993 Share of Total (In Percent)	Annual Percent Change 1983-1993
Total	$147,542	100%	$326,559	100%	8.3%
Private	70,077	47	143,695	44	7.4
Health insurance[a]	55,225	37	117,752	36	7.9
Out of pocket[b]	7,610	5	9,123	3	1.8
Other[c]	7,241	5	16,820	5	8.8
Public	77,465	53	182,864	56	9.0
Medicare	41,190	28	92,700	28	8.4
Medicaid	12,055	8	42,377	13	13.4
Federal	6,485	4	32,070	10	17.3
State and local	5,570	4	10,307	3	6.3
Other Federal[d]	12,736	9	24,430	7	6.7
Other state and local[e]	11,485	8	23,357	7	7.4

[a] Includes all payments by health insurers, excluding deductibles and copayments.

[b] Includes all payments (other than premiums) by individuals, including deductibles and copayments required by private insurance policies and by public programs such as Medicare when not covered by a third party.

[c] Includes payments by individuals, such as deductibles and coinsurance not covered by supplemental insurance, and provider non-patient revenues, private donations, and privately financed construction.

[d] Includes Department of Defense, Department of Veterans Affairs, Bureau of Indian Affairs, and Federal research.

[e] Includes operating subsidies provided by state and local governments.

SOURCE: Health Care Financing Administration, Office of the Actuary.

spending for those services that are still paid on the basis of costs or charges. As a result, hospitals are finding it more difficult to obtain the revenue necessary to support continued rapid cost growth.

Payments to hospitals grew at more than twice the rate of general inflation between 1983 and 1993. Medicaid payments more than tripled, climbing by 13.4 percent annually during the period. A large part of this growth is attributable to the increased use of provider taxes and donations by states, which caused the Federal share to rise at a rate of 17.3 percent. Payments from Medicare grew at about the same rate as total payments to hospitals, while private health insurance payments rose about one-half percentage point per year less than this total. Since Medicare enrollment has grown by 1.9 percent a year while private insurance has grown by 0.5 percent annually, Medicare payments per enrollee have gone up more slowly than private payer payments per insured person.

Within this context, this chapter discusses hospital payments, costs, and financial condition. It begins by reviewing Medicare's payments to hospitals, looking first at PPS payments and special payment adjustments, such as those for indirect medical education (IME) and disproportionate share (DSH) status. A presentation of trends in PPS operating payments and costs and the resulting PPS operating margins follows. Medicare's payment methods for inpatient capital costs, graduate medical education, hospital outpatient department services, and PPS-excluded hospitals and distinct-part units are also described.

The second section focuses on determinants of hospitals' costs. It begins with information on hospital utilization and resources (labor, services, and supplies), followed by data on capital costs and financing. The section ends by looking at hospital productivity change.

The third section discusses overall hospital financial performance. Changes in hospital revenue sources are first noted, followed by trends in hospital expenses and revenues. Total margins and hospital cost shifting are also reviewed.

MEDICARE HOSPITAL PAYMENTS AND COSTS

Payments for Medicare hospital services, which will total $105.7 billion in fiscal year 1995, have several components (see Table 2-2). The largest single source is payment for inpatient operating costs, an estimated $66.5 billion, including $60.2 billion from the Medicare program in PPS operating payments and $6.3 billion from Medicare beneficiaries. Payments for Medicare-covered hospital outpatient services will total about $19.4 billion: $12.2 billion from the Medicare program and $7.2 billion from beneficiaries for deductibles and coinsurance. Hospitals will also receive some $7.2 billion in PPS capital payments and $2.4 billion for the direct costs of graduate medical education training programs, including those for interns and residents and for nursing and allied health. An additional $10.2 billion will be paid for services provided in PPS-excluded hospitals and distinct-part units (rehabilitation and psychiatric units in PPS hospitals that are exempt from PPS). Of this amount, more than half will be paid to PPS hospitals with distinct-part units.

Medicare payments and costs have a major impact on hospital financial condition: Payment policies for inpatient and outpatient care and for other services determine how payments are distributed and provide incentives that influence

Table 2-2. Total Medicare Payments to Hospitals, by Payment Type, Fiscal Year 1995 (In Billions)

Payment Category	Amount
Total	$105.7
PPS operating	66.5
Medicare program	60.2
Beneficiary deductibles and copayments	6.3
PPS capital	7.2
Non-PPS	10.2
Outpatient	19.4
Medicare program	12.2
Beneficiary deductibles and copayments	7.2*
Direct medical education	2.4
Interns and residents	2.0
Nursing and allied health	0.4

Note: Payments are incurred benefit payments during the fiscal year. Non-PPS includes operating and capital payments to non-PPS facilities. Outpatient includes payments for all hospital outpatient services.

* Estimate based on ProPAC analysis of Health Care Financing Administration data.

SOURCE: Congressional Budget Office, March 1995 estimate.

hospital behavior. This section describes Medicare payment policies, with an emphasis on PPS operating payments and costs and their changes over time, and the corresponding PPS operating margins.

Medicare Prospective Payment: Effects of Payment Policy and Other Changes

In 1983, the Congress enacted legislation that created a prospective payment system for Medicare hospital inpatient services. Under PPS, each hospital receives a fixed payment rate to cover the operating costs associated with each discharge. The hospital's basic payment rate is based on a national standardized payment amount, which is higher for hospitals in large urban areas (metropolitan statistical areas, or MSAs, with a population of more than one million) than for other hospitals.[1] To account for differences across areas in hospital wage rates, the standardized payment amount is adjusted by a wage index for each MSA and for all the rural areas in each state.[2] The wage index measures the relative level of wages for hospital workers in each labor market area compared with the national average.

Payment also depends on the relative costliness of the case, based on the diagnosis-related group (DRG) to which the discharge is assigned. For each DRG, a relative weight is computed that represents the average standardized charges for discharges in that DRG compared with the national average for all Medicare discharges. The adjusted standardized payment amount is multiplied by the relative weight for each DRG to obtain the basic DRG payment rate for that type of case.

Basic DRG payments thus reflect the hospital's location, local wage rates, and mix of Medicare cases. These factors partly explain why PPS payments are higher for some types of hospitals than for others. For example, hospitals in urban areas receive payments per discharge that are greater than those in rural areas, reflecting historical and continuing differences in costs. The standardized payment amounts for large urban hospitals are higher. Urban labor market areas also have higher wage rates. In addition, urban hospitals are likely to treat a more complex and costly mix of Medicare patients.

Besides the basic DRG rates, hospitals receive extra payments under PPS for cases with unusually long stays or extraordinarily high costs (outliers). Payments are also adjusted for hospitals that operate graduate medical education programs (to train residents) or that serve a disproportionate share of low-income patients. These features further increase the amounts paid to urban hospitals compared with rural facilities. Hospitals in urban areas are much more likely to have outlier cases, and most teaching and disproportionate share hospitals are urban.

Before the implementation of PPS, hospitals were paid on the basis of the allowable costs they incurred in providing services to Medicare beneficiaries. Under this method, payments were unevenly distributed because of differences in hospital volume and costliness. Teaching hospitals, for example, historically have received a greater share of Medicare payments than other institutions because they generally are large facilities with high costs per case.

The implementation of PPS and hospitals' responses to the new system led to major changes in the distribution of Medicare payments and costs. The immediate result was large disparities in financial performance. The Congress responded by enacting a series of policy changes that were intended to mitigate perceived inequities in the initial design of PPS and accomplish other policy objectives. For example, the disproportionate share adjustment was added and the indirect medical education adjustment reduced in fiscal year 1986. Separate updates were applied to the urban and rural standardized payment amounts each fiscal year from 1988 through 1995.

These policies have affected the level and distribution of PPS payments among hospitals, generally as the Congress intended. However, changes in payments per case also are determined by other factors that do not reflect explicit policy decisions, as discussed below.

Cumulative Effect of Payment Policy Changes—Policy changes enacted in the Omnibus Budget Reconciliation Acts (OBRA) of 1989 and 1990 had a major impact on both the aggregate level and distribution of PPS payments. Among the most important was the gradual elimination of the difference in the standardized amounts for rural and other urban hospitals. In addition, the number of rural hospitals receiving the DSH adjustment was

expanded and the size of the adjustment was increased for many urban hospitals. Another major change involved the basis of payment for sole community hospitals (geographically isolated facilities that are considered the only available source of inpatient care for the community). These hospitals now receive payment based on their updated 1982 or 1987 costs or the PPS rate, whichever is greatest.

In addition, under OBRA 1989 hospitals may, for payment purposes, request reclassification from the geographic area in which they are located to another area that is more advantageous. This reclassification, which must be approved by the Medicare Geographic Classification Review Board (MGCRB) each year, can change the hospital's standardized payment amount or wage index, or both. While slightly more than 1,200 hospitals were reclassified in fiscal year 1993, the criteria for reclassification were modified in 1994 and fewer than 700 hospitals were reclassified in 1995. OBRA 1989 also contained a special provision for small rural Medicare-dependent hospitals (facilities in which Medicare patients account for a large share of inpatient utilization), which accorded them the same treatment as sole community hospitals; this special treatment was phased out during 1994.

Payment policy changes, including annual updates, implemented between fiscal years 1984 and 1995 increased per-case payments by an estimated 34.3 percent (see Table 2-3). The distribution of these changes reflects the provisions described above. Rural hospitals have benefited considerably. Policy changes have increased rural hospital per-case payments about twice as much as payments to urban hospitals.[3] Their effect on sole community hospital payments was particularly pronounced—an estimated increase of nearly 70 percent through 1995.

The IME adjustment has been reduced twice since PPS was implemented, contributing to a cumulative policy-related payment increase for major teaching hospitals that was about three-fifths the amount for non-teaching facilities. This occurred even though teaching hospitals receive the vast majority of DSH payments, which have risen considerably in recent years. Largely due to a high concentration of urban and teaching hospitals, the Middle Atlantic region has experienced a considerably smaller policy-related payment gain than any other part of the country.

Case-Mix Index Change—The CMI for a hospital or group of hospitals is the average DRG relative weight for the Medicare cases they treat. Because the payment for each case is determined by multiplying the standardized payment amount by the relative weight, changes in the CMI directly affect both the level and distribution of PPS payments. The CMI may increase because of changes in the types of patients treated or refinement of medical record documentation and coding practices. Real changes in costliness may result from treating patients who are more severely ill or who use more complex services. Refinement of medical record documentation and coding practices, on the other hand, may result in higher payments but does not reflect changes in treatment costs.

The CMI has risen in every year since the implementation of PPS due to both real change and coding practice change. Between fiscal years 1984 and 1995, the CMI for all hospitals grew by an estimated 29.0 percent. Contrary to the policy changes discussed above, both the level and the rate of increase in the CMI have been substantially greater for urban than for rural hospitals. In 1984, the CMI for urban hospitals was 13 percent higher than that for rural hospitals; by 1993, the difference was 22 percent. Similarly, teaching hospitals have had both higher and faster-rising CMIs than non-teaching hospitals.

Historically, much of the policy debate each year focuses on the size of the PPS update factor. However, CMI change has been almost as important as these policy decisions in determining the growth in per-case PPS payments. Moreover, the distribution of CMI change across hospitals is often quite different from the pattern of payment policy effects. The net effect of policy changes therefore has been significantly offset by CMI change. Nonetheless, the groups that have been targeted for special treatment have benefited from a net increase in payments per case.

Distribution of PPS Operating Payments

In fiscal year 1995, PPS operating payments continue to vary substantially among hospital groups (see Table 2-4). For example, 56 percent (2,906) of the 5,199 PPS hospitals are located in urban areas and account for 80 percent of PPS discharges. However, urban hospitals receive an estimated 87

Table 2-3. Effects of PPS Update Factors and Other Payment Policy Changes on Per-Case PPS Payments, by Hospital Group, 1984-1995 (In Percent)

Hospital Group	Cumulative PPS Policy Effect	Cumulative Case-Mix Index Increase*	Total Case-Mix and Policy Effect
All hospitals	34.3%	29.0%	73.3%
Urban	29.2	30.9	69.1
Rural	54.6	18.7	83.4
Large urban	29.6	30.0	68.5
Other urban	29.0	32.0	70.2
Rural referral	38.4	24.7	72.5
Sole community	69.8	14.5	94.4
Other rural	56.5	15.5	80.8
Major teaching	22.5	36.5	67.2
Other teaching	27.5	32.6	69.0
Non-teaching	38.9	24.9	73.4
Disproportionate share:			
Large urban	33.9	31.6	76.2
Other urban	32.7	32.1	75.3
Rural	56.8	19.9	88.0
Non-disproportionate share	32.7	27.4	69.1
Payment adjustments:			
IME and DSH	29.4	34.3	73.8
IME only	23.3	32.6	63.5
DSH only	42.1	25.9	78.9
No IME or DSH	36.4	24.1	69.3
Urban <100 beds	27.3	18.3	50.6
Urban 100-199 beds	33.4	24.3	65.9
Urban 200-299 beds	28.0	29.3	65.4
Urban 300-399 beds	29.5	32.5	71.5
Urban 400-499 beds	26.0	34.4	69.2
Urban 500+ beds	24.2	36.1	69.1
Rural <50 beds	61.6	9.0	76.1
Rural 50-99 beds	58.7	15.7	83.6
Rural 100-149 beds	54.5	19.6	84.8
Rural 150-199 beds	45.0	20.6	74.9
Rural 200+ beds	38.6	26.6	75.5
New England	40.7	22.3	72.1
Middle Atlantic	24.4	27.5	58.6
South Atlantic	37.5	31.2	80.4
East North Central	27.4	28.4	63.6
East South Central	37.0	30.1	78.2
West North Central	37.7	28.9	77.5
West South Central	36.5	32.6	81.0
Mountain	31.7	29.3	70.3
Pacific	38.8	27.4	76.9
Voluntary	32.4	28.7	70.4
Proprietary	34.2	34.7	80.7
Urban government	34.0	29.4	73.5
Rural government	57.8	14.7	81.0

Note: Estimated based on payment rules in effect on the last day of the fiscal year. Excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning with fiscal year 1986 and New Jersey beginning with fiscal year 1989. IME = indirect medical education. DSH = disproportionate share.

* Case-mix index changes by hospital group for fiscal years 1994 and 1995 were estimated based on historical trends.

SOURCE: Estimates based on ProPAC PPS payment model and fiscal year 1993 MedPAR file data from the Health Care Financing Administration.

Table 2-4. Distribution of PPS Hospitals and Discharges and Estimated Fiscal Year 1995 PPS Operating Payments, by Hospital Group

Hospital Group	Number of PPS Hospitals	Percent of Discharges	Percent of Payments	PPS Operating Payments (In Billions)			
				Total	Outlier	IME	DSH
All hospitals	5,199	100%	100%	$66.5	$2.9	$3.9	$3.8
Urban	2,906	80	87	57.9	2.7	3.9	3.6
Rural	2,293	20	13	8.6	0.2	*	0.2
Large urban	1,599	46	54	35.7	1.7	2.9	2.4
Other urban	1,307	34	33	22.2	1.0	0.9	1.3
Rural referral	210	6	4	3.0	0.1	*	0.1
Sole community	616	4	2	1.6	*	*	*
Other rural	1,467	10	6	4.1	0.1	*	0.1
Major teaching	239	11	18	12.1	0.6	2.6	1.3
Other teaching	806	32	34	22.8	1.1	1.4	1.2
Non-teaching	4,154	58	48	31.6	1.2	0.0	1.3
Disproportionate share:							
Large urban	765	23	30	20.3	0.9	2.2	2.4
Other urban	660	20	21	13.8	0.6	0.8	1.3
Rural	503	6	4	2.7	0.1	*	0.2
Non-disproportionate share	3,271	51	45	29.7	1.3	1.0	0.0
Payment adjustments:							
IME and DSH	652	26	35	23.1	1.1	3.0	2.5
IME only	393	16	18	11.8	0.6	1.0	0.0
DSH only	1,276	23	21	13.7	0.5	0.0	1.3
No IME or DSH	2,878	35	27	18.0	0.7	0.0	0.0
Urban <100 beds	725	5	3	2.2	0.1	*	*
Urban 100-199 beds	904	16	15	10.0	0.4	0.2	0.7
Urban 200-299 beds	599	21	21	13.9	0.6	0.5	0.7
Urban 300-399 beds	315	14	16	10.6	0.5	0.6	0.7
Urban 400-499 beds	174	10	12	7.9	0.4	0.8	0.5
Urban 500+ beds	189	14	20	13.3	0.7	1.8	1.0
Rural <50 beds	1,186	4	2	1.4	*	*	*
Rural 50-99 beds	684	6	4	2.5	*	*	*
Rural 100-149 beds	228	4	3	1.7	*	*	*
Rural 150-199 beds	102	3	2	1.2	*	*	*
Rural 200+ beds	93	3	3	1.9	0.1	*	0.1
New England	223	6	6	4.2	0.2	0.4	0.1
Middle Atlantic	526	17	20	13.4	0.9	1.3	0.9
South Atlantic	734	17	16	10.9	0.5	0.4	0.7
East North Central	801	18	17	11.4	0.4	0.8	0.4
East South Central	453	8	7	4.4	0.2	0.1	0.3
West North Central	735	8	7	4.7	0.1	0.3	0.1
West South Central	745	10	9	6.1	0.3	0.2	0.4
Mountain	345	4	4	2.7	0.1	0.1	0.1
Pacific	637	11	13	8.6	0.3	0.3	0.7
Voluntary	3,230	76	78	51.7	2.3	3.2	2.6
Proprietary	720	11	10	6.9	0.3	0.1	0.4
Urban government	360	7	9	5.8	0.2	0.6	0.7
Rural government	851	5	3	2.1	*	*	0.1

Note: PPS payments estimated using rules in effect as of October 1, 1994. Numbers may not sum due to rounding. Excludes hospitals in Maryland. IME = indirect medical education. DSH = disproportionate share.

* Less than $0.05 billion.

SOURCE: Estimates based on ProPAC PPS payment model, Congressional Budget Office March 1995 estimates, and fiscal year 1993 MedPAR file data from the Health Care Financing Administration.

percent of PPS operating payments. By contrast, the remaining PPS hospitals (44 percent) are located in rural areas; they account for 20 percent of PPS discharges but receive 13 percent of PPS payments.

As hospital size increases, the relative share of PPS operating payments tends to rise. For example, 23 percent of all PPS hospitals are rural facilities with fewer than 50 beds, but they account for only 4 percent of PPS discharges and only 2 percent of PPS payments. By contrast, urban hospitals with 500 or more beds represent only 4 percent of all PPS hospitals and 14 percent of PPS discharges, but they receive 20 percent of PPS payments.

Variations in the share of PPS operating payments reflect a combination of differences in Medicare discharge volume and other factors that affect each hospital's average payment per discharge. These include hospital and area characteristics (such as local wage rates and the mix of cases treated) that affect the basic DRG payment rate, as noted above. Other factors triggering additional payments under PPS, such as the occurrence of outlier cases, the operation of a graduate medical education program, or the treatment of a disproportionate share of low-income patients, also influence the distribution of PPS payments. The Congress included all of these factors in the payment system to compensate hospitals for differences in the cost of treating Medicare patients, as well as to accomplish broader policy objectives.

Outlier Payments—Outlier payments are intended to protect hospitals from the risk of financial losses associated with cases with unusually long stays or exceptionally high costs. They are also designed to mitigate the incentive to avoid or inappropriately treat patients who are likely to become costly. In fiscal year 1995, outlier payments are expected to account for 4.4 percent of total PPS operating payments, or about $2.9 billion (see Table 2-4).

Outlier payments are funded by a 5.1 percent reduction in the standardized payment amounts. This reduction represents the Health Care Financing Administration's (HCFA) projections of the approximate share of total DRG payments (basic DRG payments plus outlier payments) attributable to outlier payments during the year. Outlier payments are made, however, according to the actual incidence of outlier cases. The outlier policy's net effect on a given hospital's PPS payments depends on whether the hospital's outlier payments as a proportion of total DRG payments are more or less than the 5.1 percent reduction in its standardized payment amount.

Outlier payments are not evenly distributed across hospitals, because some hospitals are likelier to treat cases with exceptionally long or costly stays. Urban hospitals, for example, receive 94 percent of all outlier payments and rural hospitals only 6 percent. Similarly, while teaching hospitals account for 43 percent of PPS discharges, they receive 58 percent of outlier payments. Hospitals in the Middle Atlantic region, which have 17 percent of all PPS discharges, receive 30 percent of all outlier payments.

As with other aspects of PPS payment, the uneven distribution of outlier payments does not indicate that the outlier policy is inequitable. Certain hospitals treat a more diverse mix of patients and thus face a greater risk that some will require an extraordinary amount of resources. In fact, hospitals with a high proportion of outlier payments in any particular year are more likely than other hospitals with similar characteristics to incur PPS losses. It is appropriate, then, that some hospitals receive a greater share of outlier payments than others.

Indirect Medical Education and Disproportionate Share Payments—In fiscal year 1995, IME and DSH payments are expected to account for 11.6 percent of all PPS operating payments, or about $7.7 billion (see Table 2-4).

The IME adjustment is intended to recognize hospitals' indirect costs of operating approved graduate medical education programs. Teaching hospitals offer a wider range of services and technologies; it is believed that—compared with other facilities—they treat patients who are more severely ill and provide more diagnostic and therapeutic services to certain types of patients. They also tend to use a greater number and a more expensive mix of services per case.

PPS accounts for the indirect costs of teaching by applying a hospital-specific percentage adjust-

ment to each teaching hospital's total DRG payments. The size of a hospital's IME adjustment varies according to the intensity of its graduate medical education activities (as measured by the ratio of residents per bed). In fiscal year 1995, IME payments are expected to account for 5.9 percent of total PPS operating payments, or about $3.9 billion.

The DSH adjustment is intended to compensate hospitals that treat large proportions of low-income patients. Such hospitals are thought to have higher costs than otherwise similar hospitals for a variety of reasons, including their location and the characteristics of the patients they treat. DSH payments are expected to account for 5.7 percent of total PPS operating payments, or about $3.8 billion in fiscal year 1995.

Almost all IME and DSH payments (99 percent and 95 percent, respectively) go to facilities located in urban areas. These payments therefore account for a larger share of total PPS revenues in urban hospitals than in rural facilities. In general, larger hospitals also receive more of their PPS revenues from IME and DSH payments than smaller ones do. For example, these adjustments account for 21.3 percent of total PPS operating payments for urban hospitals with 500 or more beds, but only 0.7 percent for rural hospitals with fewer than 50 beds.

There is also substantial overlap between the hospitals receiving IME and DSH payments. Teaching hospitals account for 66 percent of all DSH payments, while disproportionate share hospitals account for 76 percent of all IME payments. As a result, IME and DSH payments are a major source of revenue for some hospitals. For instance, major teaching hospitals (those whose ratio of residents to beds is greater than 0.25) receive almost one-third of their PPS operating payments from the IME and DSH adjustments. Basic DRG payments account for only 63.4 percent of PPS operating payments for these hospitals. By contrast, nonteaching hospitals depend on basic DRG payments for 92.0 percent of their PPS operating payments.

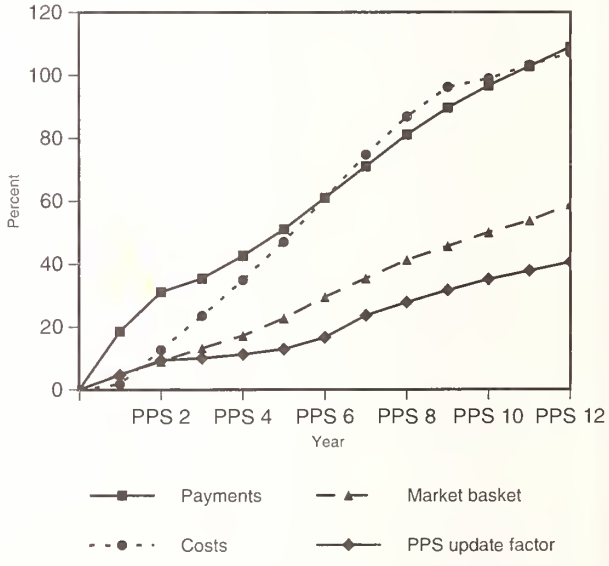
DSH and IME payments are also distributed unevenly across geographic areas. Hospitals in the Middle Atlantic and East North Central regions combined receive more than half of all IME payments. DSH payments go predominantly to hospitals in the Middle Atlantic, South Atlantic, and Pacific regions (23 percent, 19 percent, and 19 percent, respectively).

Trends in PPS Payments and Costs

The primary objectives of PPS were to control Medicare payments and establish incentives for hospitals to increase their efficiency and control their costs. Data on the trends in PPS payments and costs provide insight into how hospitals have responded to them.

PPS Operating Payments—Despite better control over payment rates under PPS, the increase in payments per discharge during the first 10 years of PPS was almost three times as great as the cumulative update factor (see Figure 2-1). Much of this increase occurred in the first two years of prospective payment, when payments per discharge grew by 18.6 percent and 10.5 percent, respectively (see Table 2-5). This is attributable to two factors: the overestimation of the base year hospital costs upon which the initial PPS rates were set due to the use

Figure 2-1. Cumulative Increases in PPS Payments and Costs Per Discharge, First 12 Years of PPS (In Percent)



Note: Payments and costs are estimated for PPS 11 and PPS 12. PPS market basket and update factor are for corresponding Federal fiscal year (1984 for PPS 1, etc.).

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

Table 2-5. Annual Change in PPS Operating Costs and Payments, First 10 Years of PPS (In Percent)

Year	PPS Costs and Payments						
	Operating Costs	Payments	Operating Costs Per Case	Payments Per Case	Market Basket Index	Update Factor[a]	Consumer Price Index[b]
PPS 1	-4.6%	11.1%	1.8%	18.6%	4.9%	4.7%	4.1%
PPS 2	4.4	4.3	10.6	10.5	3.9	4.5	3.7
PPS 3	5.6	-0.5	9.6	3.3	3.9	0.5	2.5
PPS 4	7.6	3.8	9.2	5.3	3.5	1.2	2.9
PPS 5	9.9	6.7	9.1	5.9	4.7	1.5	4.1
PPS 6	10.5	7.7	9.4	6.6	5.5	3.3	4.7
PPS 7	10.6	8.2	8.6	6.2	4.6	4.7	5.0
PPS 8	9.1	8.0	6.9	5.9	4.3	3.4	5.1
PPS 9	7.2	6.9	5.0	4.7	3.1	3.0	3.0
PPS 10	3.7	6.1	1.4	3.7	3.0	2.7	3.0

Note: Data on costs, payments, and discharges for each PPS year (PPS 1, etc.) correspond to each hospital's cost reporting period beginning in that Federal fiscal year. For instance, PPS 1 data are from hospitals' cost reports beginning during the first year of PPS (fiscal year 1984). Data on the market basket index, the update factor, and the consumer price index are from the corresponding Federal fiscal year (1984 for PPS 1, etc.). Excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning with PPS 3 and New Jersey beginning with PPS 6. Changes are based on cohorts of hospitals with cost reports available in each of two consecutive years.

[a] Average update factor beginning with PPS 5 (fiscal year 1988). Update factor for PPS 7 (fiscal year 1990) adjusted for 1.22 percent across-the-board reduction in diagnois-related group weights.

[b] Increase in the average consumer price index for all urban consumers for the corresponding Federal fiscal year.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

of unaudited Medicare Cost Reports, and a large increase in the CMI in the early years because of more emphasis on complete documentation of the medical record.

During the eight years that followed, payments per discharge grew at an annual rate of 5.2 percent. This rate is still more than twice the average PPS update factor over that period and considerably higher than the increase in the PPS market basket, which measures the prices of hospital inputs. This discrepancy between the growth in payments per discharge and the PPS rate updates is also largely explained by the rising CMI, which increased 2.4 percent per year between fiscal years 1985 and 1993.[4]

Medicare Operating Costs—The trends in operating costs and PPS payments have been quite different. One reason is that, while PPS payment rates are explicitly determined by decisions made by or for the Medicare program, operating costs likely reflect decisions by providers over the years on how to treat all of their patients—not just Medicare patients.

Payments rose sharply in the early years of PPS. Costs per discharge, however, increased by only 1.8 percent in the first year. In subsequent years, cost growth resumed its previous high rate. In the second through seventh years of PPS, operating costs per discharge grew at least 8.6 percent in every year, averaging 9.4 percent. This is substantially greater than the growth in PPS payments over the same period. By the seventh year, cumulative cost growth had exceeded payment increases under PPS.

Since the seventh year, there has been a change in the cost trend. The 6.9 percent growth in operating costs per discharge in the eighth year was the smallest since the first year of PPS, and the rise of 1.4 percent in the tenth year was below the rate of economywide price inflation. The change in the cost trend began when the PPS aggregate margin became negative for the first time under PPS and other changes in health care markets increased financial pressures on hospitals. (See Chapter 1.)

Just as payment policy effects have not been uniformly distributed across hospitals, so too have the cost experiences of facilities differed. Through the seventh year of PPS, urban and rural hospitals had about the same rate of cost growth (see Table 2-6). In the first year, both groups reacted by holding their costs far below the pre-PPS trend. In the second

Table 2-6. Annual Rate of Change in PPS Operating Costs Per Case, by Hospital Group, First 10 Years of PPS (In Percent)

Hospital Group	PPS 1	PPS 2 through PPS 7	PPS 8 through PPS 10
All hospitals	1.8%	9.4%	4.4%
Urban	1.7	9.3	4.3
Rural	1.7	9.1	5.3
Large urban	0.6	9.1	3.9
Other urban	3.2	9.8	4.7
Rural referral	1.5	9.6	5.5
Sole community	1.7	8.2	4.7
Other rural	1.6	8.9	5.3
Major teaching	1.2	9.1	4.4
Other teaching	1.4	9.2	4.3
Non-teaching	2.0	9.4	4.3
Disproportionate share:			
Large urban	-0.4	9.0	3.7
Other urban	3.3	9.8	5.1
Rural	0.5	9.8	5.9
Non-disproportionate share	2.5	9.5	4.4
Payment adjustments:			
IME and DSH	0.7	9.2	4.3
IME only	2.6	9.4	4.6
DSH only	1.5	9.5	4.5
No IME or DSH	2.2	9.4	4.2
Voluntary	1.9	9.2	4.5
Proprietary	0.5	10.0	2.7
Urban government	2.2	9.8	4.7
Rural government	1.9	9.2	5.6

Note: Data for each PPS year are from hospital cost reporting periods beginning during that Federal fiscal year. For instance, PPS 1 data are from hospitals' cost reports beginning during the first year of PPS (fiscal year 1984). Excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning with PPS 3 and New Jersey beginning with PPS 6. Changes are based on cohorts of hospitals with cost reports in each of two consecutive years. IME = indirect medical education. DSH = disproportionate share.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

through seventh years, cost increases for both urban and rural hospitals were much higher. From the eighth through tenth years, however, urban hospitals held their cost growth to 4.3 percent per year, while rural hospital costs per discharge rose at a 5.3 percent rate.

The recent low rate of cost growth among hospitals in large urban areas may reflect the fact that the most rapid hospital system changes appear to be occurring in the largest cities. In the eighth through the tenth PPS years, their operating costs per discharge increased at a rate that was a half percentage point below the national average, almost a full percentage point below that for other urban hospitals, and almost one-and-a-half percentage points below that for rural hospitals. Moreover, large urban disproportionate share hospitals have experienced somewhat smaller cost increases than other large urban hospitals, although teaching status does not seem to be correlated with the rate of cost growth.

The pattern of cost growth by ownership category is particularly interesting. In the first year of PPS, when hospitals perceived potential pressure to control costs, proprietary hospitals had by far the smallest increase—only about one-fourth as great as any of the other groups. Once this pressure lessened,

costs increased sharply for all of the groups, including the proprietaries. In the most recent period, proprietary hospitals have again achieved by far the slowest cost increases—only about three-fifths of the national average.

PPS Operating Margins

The PPS margin compares PPS operating payments and the Medicare-allowable costs for the services they are intended to cover. It is equal to the difference between PPS payments and Medicare operating costs as a percentage of payments. A positive PPS margin therefore indicates that PPS payments exceed the operating costs allocated to Medicare patients. The trend in PPS margins reflects changes in payment policy and hospital cost growth.

In the tenth year of PPS (the most recent year for which data are available) the aggregate PPS margin was positive for the first time in four years (see Table 2-7). This represents a substantial change from the past trend when PPS margins were expected to continue to decline. The turnaround is due to a sharp deceleration in hospital cost growth. If this lower growth continues, the aggregate PPS margin for the twelfth year could rise to an estimated 2.3 percent.

In the early years of PPS, the inflated payment rates resulting from the use of unaudited cost report data and CMI increases, combined with the cost-control measures undertaken in anticipation of the new system, produced extremely high PPS margins (see Figure 2-2). While these high margins rewarded hospitals for keeping their costs in check, they

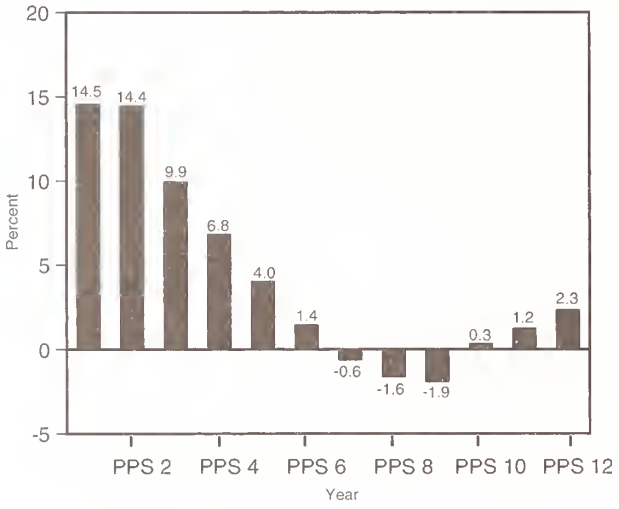
Table 2-7. PPS Operating Margins, by Hospital Group, First 10 Years of PPS (In Percent)

Hospital Group	PPS 1	PPS 2	PPS 3	PPS 4	PPS 5	PPS 6	PPS 7	PPS 8	PPS 9	PPS 10
All hospitals	14.5%	14.4%	9.9%	6.8%	4.0%	1.4%	-0.6%	-1.6%	-1.9%	0.3%
Urban	15.6	15.3	11.0	7.6	4.7	2.0	-0.2	-1.4	-1.7	0.6
Rural	8.4	8.9	3.3	1.1	-0.3	-2.0	-3.0	-3.1	-3.0	-1.8
Large urban	16.1	15.1	11.2	7.5	4.3	1.7	0.3	-0.5	-0.6	1.9
Other urban	15.0	15.5	10.7	7.8	5.2	2.3	-1.0	-2.7	-3.4	-1.5
Rural referral	10.4	13.8	8.6	6.1	4.4	1.5	-0.4	-1.1	-0.2	0.2
Sole community	8.6	7.2	2.3	0.6	-1.9	-3.3	-1.3	-0.4	-1.2	0.6
Other rural	7.4	6.7	0.4	-2.0	-2.9	-3.9	-5.3	-5.5	-5.8	-4.0
Major teaching	19.3	20.9	17.2	14.6	12.4	9.5	9.3	9.2	9.1	11.7
Other teaching	16.2	16.0	11.8	8.1	5.2	2.8	0.1	-1.0	-2.0	0.5
Non-teaching	12.4	11.6	6.3	3.2	0.5	-2.2	-4.4	-5.8	-5.9	-4.0
Disproportionate share:										
Large urban	16.2	15.3	12.0	9.6	7.6	5.6	5.0	4.8	4.9	7.9
Other urban	14.6	15.7	11.4	9.1	6.8	4.1	1.4	-0.2	-1.1	1.2
Rural	9.1	10.0	4.4	2.0	1.1	-1.2	-2.3	-1.5	-1.5	-0.2
Non-disproportionate share	14.0	13.7	8.4	4.3	0.7	-2.1	-4.9	-6.3	-6.7	-5.1
Payment adjustments:										
IME and DSH	16.7	17.1	13.9	11.7	9.9	7.5	6.2	5.4	4.9	7.7
IME only	17.3	17.9	12.8	7.4	3.1	0.3	-2.7	-3.5	-4.2	-2.7
DSH only	12.6	12.1	7.0	4.4	2.1	-0.2	-1.9	-2.6	-2.6	-0.5
No IME or DSH	12.2	11.2	5.8	2.4	-0.7	-3.7	-6.2	-8.1	-8.3	-6.6
Voluntary	14.9	14.9	10.6	7.3	4.4	1.9	-0.3	-1.6	-2.1	0.1
Proprietary	14.8	13.2	8.0	4.6	1.5	-2.3	-4.5	-3.1	-1.8	1.8
Urban government	14.6	14.9	10.2	8.3	6.7	4.2	3.0	1.6	1.4	3.0
Rural government	7.1	6.3	-0.3	-2.5	-2.7	-4.0	-4.3	-4.7	-5.6	-4.8

Note: Data for each PPS year are from hospital cost reporting periods beginning during that Federal fiscal year. For instance, PPS 1 data are from hospitals' cost reports beginning during the first year of PPS (fiscal year 1984). Excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning with PPS 3 and New Jersey beginning with PPS 6. IME = indirect medical education. DSH = disproportionate share.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

Figure 2-2. Aggregate PPS Operating Margin, First 12 Years of PPS (In Percent)



Note: PPS margin estimated for PPS 11 and PPS 12.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

also diminished the incentive to continue this behavior in the face of such large surpluses. In response to these margins, the PPS updates were kept low for several years, while cost growth resumed at its previous pace. Thus, PPS margins began to fall.

By the seventh year the cumulative increase in costs per discharge had exceeded the increase in payments per discharge, and the aggregate PPS margin had fallen below zero. Decreases in the margins exceeded two percentage points in five successive years. In the eighth year, as cost increases began to moderate, so did the decline in PPS margins.

Distribution of PPS Margins by Hospital Group—The aggregate PPS margin went down for every hospital group through the eighth year, although there were differences that reflect the patterns of hospital payments and costs described above. The PPS margin for urban hospitals was 15.6 percent in the first year—exceeding the margin for rural hospitals by 7.2 percentage points. As margins fell from their early high levels, the urban/rural disparity came to be seen as a threat to the existence of rural hospitals. Beginning in fiscal year 1986 (the third year of PPS), the Congress enacted a series of policy changes intended to improve payment for rural hospitals. By the fifth year, although the difference between the two groups had decreased to five percentage points, rural hospitals had a negative PPS margin while urban hospitals were still receiving payments substantially in excess of their costs. The disparity in PPS margins narrowed to 1.3 percentage points by the ninth year, but widened somewhat in the tenth year.

Changes in payment policy have continued to favor rural over urban hospitals. These changes are expected to generate a higher aggregate PPS margin for rural hospitals than for urban hospitals in the twelfth year of PPS, unless urban hospitals continue to achieve slower cost growth than rural hospitals.

Major teaching hospitals still have the highest aggregate PPS margin of any hospital group. Moreover, the differences between the PPS margin for major teaching hospitals and those for other teaching hospitals and non-teaching hospitals have grown. The PPS margin for major teaching hospitals declined from 19.3 percent in the first year to a low of 9.1 percent in the ninth year, whereas the PPS margin for other teaching hospitals and for non-teaching hospitals fell much more sharply. In the tenth year, the PPS margins for all three groups rose, but the increase was largest for the major teaching group. The tenth-year PPS margin for major teaching hospitals was 11.7 percent—11.2 percentage points higher than for other teaching hospitals and 15.7 percentage points higher than for non-teaching hospitals; these differences were 3.1 percentage points and 6.9 percentage points, respectively, in the first year.

The DSH adjustment also appears to have substantially affected PPS margins, primarily for hospitals in large urban areas. These hospitals had an aggregate PPS margin of 7.9 percent in the tenth year, while other urban disproportionate share hospitals had a margin of 1.2 percent. Hospitals that did not receive DSH payments had a PPS margin of –5.1 percent.

Hospitals receiving both IME and DSH payments—including most major teaching hospitals—had an aggregate PPS margin of 7.7 percent in the tenth year. However, the margin was –2.7 percent for hospitals receiving only IME payments, and

–0.5 percent for those receiving only DSH payments. Hospitals that got neither adjustment had a PPS margin of –6.6 percent.

The trend in PPS margins by ownership category also reflects changes in payment policy as well as degree of success in controlling costs. In the first year, voluntary, proprietary, and urban government hospitals all had margins between 14.6 percent and 14.9 percent, while rural government hospitals lagged behind. In the seventh year, the PPS margin for the proprietary group, which had fallen 19.3 percentage points since the beginning of prospective payment (to –4.5 percent), was the lowest of the four groups. However, as proprietary hospitals held down their cost growth, their PPS margin increased by 6.3 percentage points, to 1.8 percent in the tenth year of PPS. At that time, urban government hospitals had a PPS margin of 3.0 percent. This was higher than other ownership groups, a trend seen in each year since the implementation of the DSH adjustment.

Distribution of PPS Margins Within Hospital Groups—During the first two years of PPS, when margins generally were high, payments covered Medicare operating costs for all but a few hospitals. However, as PPS margins fell in subsequent years and more hospitals experienced financial pressure under prospective payment, the distribution of these margins became increasingly important. By the ninth year of PPS, about three of every five hospitals had negative PPS margins, compared with one of every six in the first year (see Table 2-8). The proportion of hospitals with negative PPS margins fell in the tenth year, but they still outnumbered those with positive margins.

The range of PPS margins also grew substantially over the first nine years of PPS. In the first year, 50 percent of all PPS hospitals had PPS margins ranging from 3.4 percent to 17.7 percent—a 14.3 percentage point spread (see Table 2-8). By the ninth year, this difference had grown to 23.4 percentage points, declining slightly to 23.0 percentage points in the tenth year.

The distribution of PPS margins within each hospital group was also very wide (see Table 2-9). A quarter of all urban facilities had margins of –13.8 percent or below. Another quarter had margins of 8.2 percent or higher. This range was even greater for rural facilities.

The range of margins differs within groups of urban and rural hospitals as well. A greater proportion of hospitals in smaller metropolitan areas had negative PPS margins compared with hospitals in other locales. At the same time, most rural referral centers and sole community hospitals had PPS margins above zero, while the average hospital in the other rural group fared three to four percentage points worse than most rural referral or sole community hospitals.

Among major teaching hospitals, the distribution of PPS margins was consistently high relative to other hospital groups. Only 17.8 percent of these institutions had negative PPS margins, and most

Table 2-8. Distribution of PPS Operating Margins and Percentage of Hospitals with Negative Margin, First 10 Years of PPS (In Percent)

	PPS Margin									
Percentile	PPS 1	PPS 2	PPS 3	PPS 4	PPS 5	PPS 6	PPS 7	PPS 8	PPS 9	PPS 10
10th	-6.7%	-8.7%	-16.2%	-19.7%	-24.3%	-26.2%	-27.5%	-29.1%	-30.9%	-27.6%
25th	3.4	2.1	-3.8	-6.8	-9.7	-11.9	-13.7	-15.7	-16.4	-14.4
Median	11.3	10.7	5.6	3.6	1.5	-0.7	-2.5	-3.9	-3.8	-1.7
75th	17.7	18.0	13.4	11.8	10.9	9.3	8.0	7.1	7.0	8.6
90th	23.1	24.4	19.8	19.0	19.3	18.1	17.3	16.5	16.2	18.2
Percent of hospitals with negative PPS operating margins	16.7	18.8	32.3	39.8	46.1	51.8	56.6	59.2	59.3	54.1

Note: Data for each PPS year are from hospital cost reporting periods beginning during that Federal fiscal year. For instance, PPS 1 data are from hospitals' cost reports beginning during the first year of PPS (fiscal year 1984). Excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning with PPS 3 and New Jersey beginning with PPS 6.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

Table 2-9. Distribution of PPS Operating Margins, by Hospital Group, Tenth Year of PPS (In Percent)

Hospital Group	Percentile			Percent with Negative PPS Margin
	25th	Median	75th	
All hospitals	-14.4%	-1.7%	8.6%	54.1%
Urban	-13.8	-1.9	8.2	54.4
Rural	-14.9	-1.3	9.1	53.8
Large urban	-13.4	-0.2	10.2	50.3
Other urban	-14.0	-3.3	6.1	59.3
Rural referral	-11.8	0.3	7.6	49.5
Sole community	-14.1	1.2	12.3	47.5
Other rural	-15.9	-2.8	8.3	57.1
Major teaching	4.3	13.4	20.0	17.8
Other teaching	-9.5	0.7	9.0	48.2
Non-teaching	-15.9	-3.1	7.7	57.2
Disproportionate share:				
Large urban	-5.1	6.3	16.7	33.6
Other urban	-10.1	-0.1	8.2	50.2
Rural	-12.2	1.7	12.1	47.0
Non-disproportionate share	-17.4	-4.2	6.4	60.4
Payment adjustments:				
IME and DSH	-2.3	6.6	15.4	30.8
IME only	-14.6	-3.5	5.1	59.1
DSH only	-12.3	0.3	10.9	49.2
No IME or DSH	-17.6	-4.3	6.5	60.6
Voluntary	-13.4	-1.8	7.8	55.1
Proprietary	-13.0	1.1	15.2	47.8
Urban government	-15.7	-1.0	8.9	52.2
Rural government	-18.8	-2.8	8.4	55.5

Note: Excludes hospitals in Maryland. IME = indirect medical education. DSH = disproportionate share.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

had considerably higher margins than the typical non-teaching hospital. Disproportionate share hospitals (which substantially overlap with those in the major teaching group) tended to have higher than average PPS margins across the board, even though Medicare costs substantially exceeded PPS payments for some of these facilities. Hospitals receiving neither IME nor DSH payments generally performed worse than any other hospital group.

Proprietary hospitals had the widest range of PPS margins. One in four had a PPS margin above 15.2 percent, but an equal number had a margin below –13.0 percent. A majority of proprietary hospitals had positive PPS margins, however; the median for this group was almost three percentage points higher than that for all hospitals. Rural government hospitals also had a wide range of PPS margins and the highest share of facilities with negative margins.

Medicare Capital Payment

In fiscal year 1992, Medicare began paying for hospital inpatient capital costs based on prospectively determined per-case rates. Previously, Medicare had reimbursed hospitals based on their actual capital costs. During the 10-year transition to a single capital rate, payments will reflect both hospital-

specific costs and a single Federal capital payment rate. Medicare payments for hospital capital costs will be an estimated $7.2 billion in fiscal year 1995.

During the transition, hospitals are paid according to either a fully prospective method or a "hold-harmless" method. The choice depends on a comparison of the hospital-specific rate for each hospital and its Federal payment rate. A facility's hospital-specific payment rate is its updated 1989 Medicare-allowable inpatient capital cost per discharge. The Federal rate is the updated 1989 nationwide average Medicare cost per discharge. Payment is adjusted for factors reflecting the hospital's location, teaching, and disproportionate share status and for the relative costliness of the case (the DRG weight). Lower-cost hospitals, with a 1992 hospital-specific rate below their adjusted Federal rate, are paid under the fully prospective method; others are paid under the hold-harmless method.

The fully prospective method sets payments as a blend of the hospital-specific and Federal rates. In fiscal year 1995, payments to hospitals under this method will equal 60 percent of the hospital-specific rate and 40 percent of the Federal rate. Hospitals paid under the hold-harmless method have per-case payments that equal the Federal rate or a blend of payments for old and new capital, whichever is greater. As a hospital's capital depreciates, its share of old capital declines and its total payment per case eventually equals the Federal rate. HCFA estimates that capital payments are divided about equally between hospitals with high and low capital costs.

During the first five years, per-case capital rates were adjusted so that total payments equaled 90 percent of estimated Medicare-allowed capital costs. In fiscal year 1996, this budget neutrality requirement will be lifted. As with payment for operating expenses, capital rates are updated annually. For the first five years of the transition, historical cost increases were used to increase the Federal and hospital-specific rates. Cost-based updates will be replaced by an update framework, which will directly determine payment rate growth.

Medicare Direct Graduate Medical Education Payments

Medicare's payments to hospitals include funding to support the training of interns and residents, nurses, and allied health professionals. In fiscal year 1995, Medicare will pay about $2.0 billion to hospitals for the training of interns and residents through a prospective hospital-specific per resident payment. Another $400 million will be paid for the direct costs of hospital-based nursing and allied health professions training programs.

When PPS was implemented, the direct costs of residency training programs (salaries and benefits for residents and faculty, classroom costs, and associated overhead) were reimbursed on a reasonable cost basis. The Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) created a hospital-specific prospective per-resident payment for these costs. This amount is based on each hospital's average reported per-resident costs from the first year of PPS. It is updated annually by the increase in the consumer price index (CPI) for urban consumers. The COBRA legislation counted residents as half a full-time equivalent (FTE) employee if they were more than a year beyond initial board eligibility (the minimum training period required in a residency to become board-certified) or if they had more than five years of training.[5] The Medicare share calculation used for direct graduate medical education payment was changed from a departmental cost basis to a simpler Medicare share of inpatient days. Total Medicare graduate medical education payments for a hospital equal the updated per-resident payment amount, multiplied by both the weighted FTE count of residents and Medicare's share of inpatient to total patient days in the hospital.

Further payment changes occurred under OBRA 1993, which created separate hospital-specific payment rates for primary care and nonprimary care residents. Rates for primary care residents were updated while those for other residents were frozen in fiscal years 1994 and 1995. In addition, the Act further reduced payment for subspecialty residents by counting all residents beyond initial board eligibility (rather than just those one year beyond eligibility) as half an FTE. The new weighting scheme means that subspecialty residents in fields like cardiology are now counted as half an FTE throughout their training.

In fiscal year 1995, the average per-resident payment amount will be about $65,000.[6] The amount varies, however, from less than $20,000 to well over $120,000. This variation reflects 1984 base-period

costs and could be due to actual differences in training program costs or hospital cost reporting practices.

Total Medicare direct graduate medical education payments are affected by the total number of residents training in approved programs, which has escalated recently. In 1994, there were roughly 104,000 residents, up 17 percent since 1992 and almost 30 percent since 1988.[7] Medicare payment policy may have helped stimulate this growth, although hospitals may also have responded to limits some states placed on residents' work hours by hiring additional residents.

Medicare also provides funds for hospital-based nurse education and allied health professions training programs. In fiscal year 1995, Medicare will pay hospitals about $400 million for the classroom and clinical training costs of these programs. Medicare payment is made on a reasonable cost basis. Programs must be hospital-based or have a written agreement with a hospital to be eligible for funding. Formerly, nurses were trained largely through hospital-based training programs (also called diploma programs). In 1965, for instance, 77 percent of all registered nurses (RNs) were trained in these programs; by 1990, this figure had fallen below 8 percent. The number of programs has dropped from more than 800 in 1965 to only 112 in 1994.[8] Nurse training programs are now primarily sponsored by universities or community colleges. Medicare pays for such training only if longstanding joint agreements exist between the hospital and the school and if Medicare had paid such costs prior to 1989. These payment restrictions also apply to allied health professions training programs.

Medicare Payments for Hospital Outpatient Services

In fiscal year 1995, estimated payments for Medicare-covered hospital outpatient services will be $19.4 billion. The Medicare program will pay $12.2 billion of this total; Medicare beneficiaries will pay $7.2 billion. Outpatient services contribute a growing share of total hospital revenues and an increasing percentage of the payments hospitals receive from Medicare. Under current Medicare policies, payments for most outpatient services increase when costs rise. Because this gives facilities limited incentives to control costs, the Congress has mandated that Medicare develop a prospective payment system for outpatient services. At the Congress's request, the Secretary of Health and Human Services has submitted a proposal for phasing in such a system.[9] The proposed system would begin with ambulatory surgery, radiology, and other diagnostic services provided in hospital outpatient departments.

For most hospital-provided ambulatory surgeries, Medicare pays the lesser of costs, charges, or a blended payment amount. The blended amount combines a portion of the hospital's costs or charges (whichever is lower) with a portion of the prospective rate that would have been paid had the surgery been performed in a free-standing ambulatory surgical center. Radiology and selected diagnostic services are paid using the same method. For these services, the prospective payment amount in the blended formula is based on a portion of the appropriate physician fee schedule amount.

Laboratory services are already paid using a prospective fee schedule. Some nonsurgical procedures, such as ambulance services; emergency room visits; and physical, speech, and occupational therapy services, are paid under the lesser of reasonable costs or the provider's customary charge. Rural primary care hospitals can choose between two payment methods for outpatient services, one based on facility costs and professional charges and the other on an all-inclusive rate (combining facility and professional medical services).

Medicare payment to cost ratios for outpatient services generally have been somewhat lower than those for inpatient services. HCFA estimates that under current law, payments for ambulatory surgery services by the Medicare program and beneficiaries were 86.7 percent of reported costs. For radiology, such payments covered 87.5 percent of reported costs.[10]

Medicare Payments for PPS-Excluded Hospitals and Distinct-Part Units

When PPS was established, prospective payment based on DRGs could not be applied to certain providers. Five types of specialty hospitals (psychiatric, rehabilitation, long-term care, children's, and cancer) and two types of distinct-part units in general hospitals (psychiatric and rehabilitation) are

now exempt from PPS. Because DRGs fail to predict these providers' resource costs accurately, they were excluded from PPS.

PPS-excluded hospitals and distinct-part units are subject to the payment limitations and incentives established in the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA). Each provider is paid on the basis of either the lower of its current Medicare-allowable inpatient operating cost per discharge or a target amount. The target amount is based on the provider's allowable costs per discharge in a base year, trended to the current year by an annual update factor.

Under TEFRA, a facility with Medicare-allowable inpatient operating costs that are less than its ceiling (the target amount times the number of discharges) receives its costs plus 50 percent of the difference between these costs and the ceiling or 5 percent of the ceiling, whichever is less. A facility with inpatient operating costs above the ceiling receives its ceiling plus 50 percent of the difference between the ceiling and its costs, up to 110 percent of the ceiling. An exceptions process is available through which payments may be adjusted.

The number of hospitals with distinct-part units exempt from PPS has been growing rapidly. Since PPS began, total Medicare payments to these facilities have increased, on average, 20 percent annually. They will be about $10.2 billion in fiscal year 1995, more than half of which will go to hospitals that already receive PPS payments for acute care services.

The Prospective Payment Assessment Commission (ProPAC) recently examined the financial performance of hospitals with distinct-part units. Overall, these hospitals had higher PPS and total margins than facilities without such units. However, the relationship between having these units and performing better financially was not statistically significant after controlling for hospital characteristics such as ownership, number of beds, and geographic location. Similarly, after controlling for other hospital characteristics, opening distinct-part units did not improve financial performance.

DETERMINANTS OF HOSPITAL COSTS

An array of factors determine overall hospital costs. These include total utilization of hospital

Table 2-10. Occupancy Rate, Admissions, Adjusted Admissions, and Outpatient Visits, 1980-1994 (In Percent)

Year	Occupancy Rate	Admissions	Adjusted Admissions	Outpatient Visits
1980	75.9%	2.9%	3.1%	3.0%
1981	75.8	0.9	1.1	1.4
1982	74.5	0.0	0.3	1.1
1983	72.2	-0.5	0.0	2.8
1984	66.6	-3.7	-2.5	1.4
1985	63.6	-4.9	-2.8	4.5
1986	63.4	-2.1	-0.3	8.3
1987	64.1	-0.6	0.9	5.8
1988	64.5	-0.4	1.4	6.2
1989	64.9	-1.0	0.5	4.0
1990	64.5	-0.5	1.5	6.0
1991	63.5	-1.1	1.1	5.4
1992	62.1	-0.8	1.1	6.4
1993	61.4	0.7	2.0	6.5
1994	60.2	0.9	2.9	7.0
Average				
1980-1983	74.6	0.8	1.1	2.1
1984-1994	63.5	-1.2	0.5	5.6

Note: Adjusted admissions are equivalent to the sum of inpatient admissions and an estimate of the volume of outpatient services. This estimate is calculated by multiplying outpatient visits by the ratio of outpatient charges per visit to inpatient charges per admission.

SOURCE: American Hospital Association National Hospital Panel Survey.

services, the amount and cost of labor, the cost of supplies and services, capital costs, and how efficiently hospitals combine inputs to produce hospital services. This section discusses these factors.

Utilization

A decade-long decline in inpatient utilization appears to have subsided. Total admissions increased in 1993 for the first time since 1982. They rose again in 1994, when the growth rate for outpatient visits reached its highest rate since 1986 (see Table 2-10). Overall hospital utilization—measured by adjusted admissions (the sum of admissions and visits, each weighted to reflect relative costliness)—has gone up since 1987. However, the admission rate per 1,000 persons was lower for the thirteenth consecutive year and length of stay declines reduced overall occupancy rates.

Changes in Hospital Employment

Labor costs—salaries, wages, and employee benefits—account for more than half of hospital operating expenses. Hospitals appear to be trying to control the growth in this cost category by slowing the increase in the number of employees and constraining the rise in compensation. From a peak of 3.3 percent in 1991, employment growth slowed to 2.3 percent in 1992 and to 1.5 percent in 1993 (see Table 2-11). Preliminary data indicate that a real decline is likely in 1994.

For many years, hospital employee compensation growth exceeded that for the economy as a whole. The employment cost index (ECI) for hospital workers, which accounts for hospital industry skill mix changes, increased at an average annual rate of 5.6 percent from 1987 through 1992 (see Table 2-12). This compares with an average annual rate of 4.4 percent for all employees. Recent trends are different. Wages, salaries, and benefits for hospital workers increased by an average of 3.1 percent in 1993 and 1994, compared with 3.4 percent growth in the general economy.

Since 1984, hospitals have been shifting to a more skilled, higher-paid staff. Substitution of costlier workers may enhance productivity if these employees can complete tasks in less time or use fewer inputs. While overall hospital employment rose by 14 percent between 1983 and 1992, managerial personnel increased by 41 percent and professional and technical personnel by 24 percent, indicating substantial growth in employee skill mix.[11] Moreover, nurses made up more than a third of hospital staff both in 1983 and in 1992, but the

Table 2-11. Change in Hospital Employment, 1984-1993 (In Percent)

Year	FTEs	Adjusted FTEs	Adjusted FTEs Per Adjusted Admission
1984	-2.5	-1.6	-0.3
1985	-0.8	-0.3	2.0
1986	1.0	2.1	3.1
1987	2.9	3.0	3.5
1988	2.8	2.7	1.4
1989	3.0	3.0	2.5
1990	3.3	3.2	1.0
1991	3.3	3.5	1.5
1992	2.3	3.0	1.0
1993	1.5	2.3	1.0
Averages			
1981-1983	2.1	2.5	2.5
1984-1993	1.8	2.4	1.5

Note: Adjusted FTEs are full-time equivalent employees adjusted to reflect change in skill mix. Adjusted admissions are equivalent to the sum of inpatient admissions and an estimate of the volume of outpatient services. This estimate is calculated by multiplying outpatient visits by the ratio of outpatient charges per visit to inpatient charges per admission. FTE = full-time equivalent.

SOURCE: ProPAC analysis of American Hospital Association Annual Survey of Hospitals.

Table 2-12. Change in Hospital and Civilian Worker Compensation, Fiscal Years 1987-1994 (In Percent)

Fiscal Year	Hospital Compensation[a]	Civilian Worker Compensation[b]	Consumer Price Index
1987	4.6%	3.4%	4.3%
1988	5.9	4.8	4.1
1989	7.0	5.1	4.7
1990	6.6	5.2	5.6
1991	5.1	4.3	3.9
1992	4.4	3.5	3.1
1993	3.4	3.6	2.8
1994	2.9	3.2	2.9

Note: All changes are percentage change from index level at previous year's end. Compensation includes both wages and benefits.

[a] Based on employment cost index compensation series for hospital workers.

[b] Based on employment cost index compensation series for all civilian workers.

SOURCE: Bureau of Labor Statistics.

proportion of RNs increased and that of lesser-skilled licensed practical nurses (LPNs) decreased. There were 4.6 RNs for every LPN in 1992, compared with 2.8 in 1983.[12] The actual number of LPNs employed in hospitals fell by more than 77,000 over the period.

The overall expansion of the work force has occurred despite large declines in inpatient utilization and a continuing rise in outpatient use. Labor intensity, measured by skill-mix adjusted FTEs per adjusted admission, increased by more than 2 percent annually in four of the five years between 1985 and 1989. From 1990 on, growth has been a modest 1.0 percent to 1.5 percent.

Costs of Services and Supplies

In 1994, about 38 percent of hospital costs were for non-labor expenses other than capital. These include items ranging from malpractice premiums and pharmaceuticals to paper goods and food, as well as payments for contract services such as temporary nurses and, in some cases, management of the emergency department or other hospital functions.

Prices for supplies and services used by hospitals have generally increased less rapidly than employee compensation. Particular items may exhibit higher growth rates. But given their small share of total costs, they have a minimal overall impact. Malpractice premiums, for instance, rose 11 percent per year from 1983 through 1993, but only represent about 2 percent of hospital spending.[13] Further, some items experience volatility in growth from year to year, which tends to average out over the longer term. Utilities prices are one example. They actually decreased by 1 percent annually over this period. Professional fees grew 4 percent per year. The other supply and services items rose, on average, 3 percent per year.

Capital Costs and Financing

In 1994, capital depreciation and interest were 8.3 percent of total hospital costs (see Table 2-13). Capital cost growth was 6.3 percent, considerably slower than what it was in the early 1980s. Growth in capital cost per adjusted admission continues to slow, but remains higher than economywide inflation.

Table 2-13. Change in Capital Costs, 1980-1994 (In Percent)

		Annual Rate of Change	
Year	Capital/ Total Cost	Capital Cost	Capital Cost/ Adjusted Admission
1980	6.2%	15.2%	11.7%
1981	6.3	20.4	19.0
1982	6.5	20.7	20.4
1983	6.9	17.1	17.1
1984	7.9	18.6	21.6
1985	8.3	12.0	15.3
1986	8.4	11.2	11.5
1987	8.5	11.6	10.6
1988	8.5	9.6	8.1
1989	8.5	9.8	9.3
1990	8.4	10.4	8.7
1991	8.3	7.7	6.6
1992	8.2	8.4	7.2
1993	8.2	7.0	4.9
1994	8.3	6.3	3.3

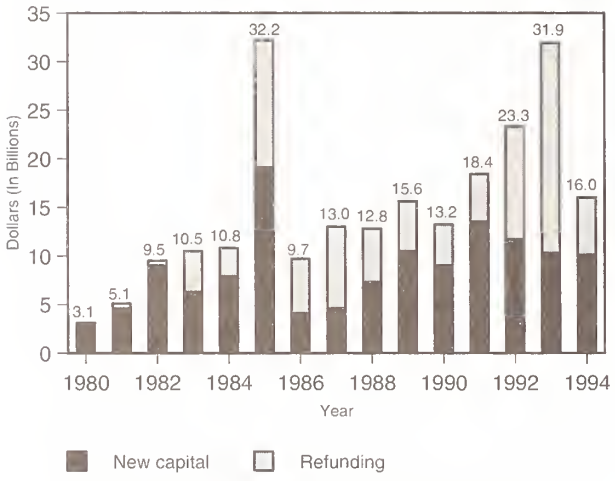
Note: Adjusted admissions are equivalent to the sum of inpatient admissions and an estimate of the volume of outpatient services. This estimate is calculated by multiplying outpatient visits by the ratio of outpatient charges per visit to inpatient charges per admission.

SOURCE: ProPAC analysis of data from the American Hospital Association National Hospital Panel Survey.

Hospitals obtain capital for new construction and for modernization of existing facilities from internal financing, borrowing, and philanthropy. Most borrowing is done by local or state authorities on behalf of hospitals, allowing bonds to be sold on the tax-exempt debt market with lower interest rates for hospitals. The volume of these bond issues has varied greatly over the last 15 years. Borrowing stepped up in 1985, in anticipation of tax law change. It increased greatly again in 1992 and 1993 in response to lower interest rates. Total health care and nursing home municipal bond volume was $16 billion in 1994, with tax-exempt bonds accounting for 98 percent of this activity (see Figure 2-3).[14] Between 1993 and 1994, bond volume fell by almost 50 percent, with hospital bonds down 54 percent. This reflects fewer bonds issued for refunding (essentially refinancing of outstanding debt at lower interest rates), although the volume issued to raise new capital was virtually unchanged.

Hospital access to capital markets depends on various factors, including the facility's credit rating. A higher credit rating is usually associated with a lower interest rate and greater availability of debt

Figure 2-3. Health Care and Nursing Home Tax-Exempt Municipal Bond Volume, 1980-1994 (In Billions)



SOURCE: Information for 1980 to1991 from Securities Data Co., Inc., and for 1992, 1993, and 1994 from *The Bond Buyer*.

financing.[15] Credit ratings are based on factors like the hospital's ability to adapt to payment system changes and managed care activity, as well as whether it can control costs and expand by creating networks. Ratings are set by major credit rating agencies like Moody's and Standard & Poor's. In 1994, Standard & Poor's downgraded 32 private, nonprofit hospital bond issues totaling $900 million and upgraded 19 issues totaling $1.0 billion. (These totals exclude those resulting from the downgrade of the California Mortgage Loan Program, which insures many borrowers in the state.) This represents a 1.7 to 1 ratio of the number of downgrades to upgrades, compared with 1.1 in 1993, suggesting some weakening in financial performance or increase in perceived risk in the hospital industry.

Hospitals can improve their prospects for access to bond financing by making arrangements for certain credit enhancements, such as insurance to guarantee payment. In 1994, 59 percent of new health care bond issues were accompanied by credit enhancements. Bond insurance accounted for 44 percent and insured mortgages for 10 percent of these credit enhancements. As the health care industry has changed, the risks involved in lending to hospitals and the prospects for defaults have caused growing concern, leading to proposals for public or private "bailout pools" to reduce the risk associated with lending to hospitals.[16]

Hospital Productivity Change

A major factor determining the hospital industry's cost growth is change in productivity, or how much product is obtained for the resources spent. Increased productivity implies that the hospital can produce more output with the same resources, or the same output with fewer resources.

Industries differ in their rates of productivity growth: Slower growth has long characterized service industries. Various factors have been offered to explain this poorer performance, including fewer productivity-enhancing technology changes than in other industries, inherent limitations on productivity improvement in personal services, and difficulty in measuring service output.[17] Other industries subject to low reported productivity growth are those that buy or sell high-technology products. Data on hospital productivity growth must be interpreted carefully. Because hospitals are part of the service sector and use high-technology products, their productivity growth might be expected to be less than in many other parts of the economy.

Hospital productivity in producing a completed admission depends on service-level productivity and the intensity of those services. Service-level productivity (or intermediate productivity) provides information on how efficient hospitals are in producing intermediate services (such as laboratory tests, surgeries, and days of nursing care).[18] Hospitals have not been successful at improving service-level productivity. Only in one year since the introduction of PPS (1988) has it gotten better (see Table 2-14). Though declines in service-level productivity were relatively small in 1989 and 1990, a substantial drop to 2.1 percent in 1991 contributed to poor aggregate productivity seen in that year. In 1993, service-level productivity fell the most since the beginning of PPS, declining by 4.2 percent. The major fall-off could mean that hospitals failed to adjust service-level inputs in response to the decreasing intensity that occurred in 1993.

Service intensity reflects changes in the number and type of intermediate services that hospitals provide per admission after controlling for changes in patient complexity. In an initial response to PPS, hospitals reduced service intensity significantly, mostly through shorter lengths of stay. Intensity growth resumed after the first two years of PPS,

Table 2-14. Change in Aggregate Total Factor Productivity and Its Components, 1984-1993 (In Percent)

Year	Service-Level Productivity[a]	Case-Mix Constant Intensity of Services	Aggregate Productivity[b]
1984	-1.9%	-2.6%	0.7%
1985	-3.3	-2.2	-1.1
1986	-1.5	2.4	-3.9
1987	0.0	2.5	-2.5
1988	1.1	1.6	-0.5
1989	-0.4	0.8	-1.2
1990	-0.4	0.0	-0.5
1991	-2.1	0.6	-2.7
1992	-1.3	1.7	-3.0
1993	-4.2	-1.9	-2.3

Note: Change in service-level productivity minus change in intensity of services equals change in aggregate productivity, although this relationship may not be exact due to rounding.

[a] Defined as service output per unit of labor, supply and service, and capital inputs.

[b] Defined as admissions per unit of labor, supply and service, and capital inputs, with admissions adjusted for real case-mix change and outpatient activity.

SOURCE: ProPAC analysis based on data from the American Hospital Association Annual Survey of Hospitals, Bureau of Labor Statistics, and other sources.

however, rising about 2.5 percent in both 1986 and 1987. For the next three years, the industry succeeded in scaling back intensity increases. In 1992, the opposite occurred as hospitals intensified the service content of admissions by 1.7 percent. This was a major cause of the worst aggregate productivity performance in six years. In 1993, intensity of services fell by almost 2 percent. This reduction reflected a 3 percent fall-off in average length of stay.

Aggregate productivity, which represents the net effect of service-level productivity and case-mix constant intensity of services, has risen only once since the start of PPS. This was in 1984, when there was a 0.7 percent improvement at least partially in response to the introduction of prospective payment. But in 1986 and 1987, substantial increases in intensity caused some rather significant productivity drops. Over the next three years, declines in productivity moderated somewhat before they fell again in 1991 and 1992. The drop in 1991 appears to be the result of a fairly large decline in service-level productivity, along with some increase in intensity. The 1992 decline was driven by a major increase in intensity. In 1993, however, substantial reductions in intensity helped to slow the aggregate productivity drop. At the same time, service-level productivity fell more than at any point since PPS began.

CHANGES IN HOSPITAL REVENUES AND FINANCIAL PERFORMANCE

Hospital financial performance depends on revenues as well as costs. Hospital revenue consists largely of payments received from third-party payers for inpatient and outpatient care. These payments come from public sources (chiefly Medicare and Medicaid) and from private payers. The relative contribution of each payer has changed in the last 10 to 15 years. This section discusses changes in revenue by hospital activity, changes in hospital financial performance, and hospital use of cost shifting to permit continued care for patients with low payments and to buffer against payer pressure to contain costs.

Hospital Revenue Growth

The contribution of various hospital services to total revenue growth has changed over time (see Table 2-15). While inpatient services still account for most hospital revenue, they have been declining as a share of the total by about one percentage point annually. Outpatient revenue has more than doubled as a share of total hospital revenue since 1980. It has generally risen faster than inpatient revenue, even before PPS was implemented. Since 1983, inpatient revenue growth has remained at single-digit levels, falling to its lowest level in almost two decades in 1994. Outpatient revenue has grown rapidly, exceeding inpatient revenue by an average of nine percentage points annually since 1984.

The trend in outpatient revenue is due largely to two factors: the shift to the outpatient department for services previously performed on an inpatient basis and the real growth in outpatient volume. The shift from the inpatient setting was facilitated by technology changes that made it easier to provide many services on an outpatient basis. At the same time, changes stimulated by PPS affected the care of non-Medicare patients as well, helping to reduce the spending growth rate for hospital inpatient services.[19]

Growth in outpatient revenue per visit has outpaced that for inpatient revenue per admission in almost every year since 1980. Since 1992, the

Table 2-15. Change in Hospital Revenue and Proportion of Revenue, by Source, 1980-1994 (In Percent)

Year	Inpatient Revenue	Outpatient Revenue	Other Revenue	Total Revenue	Inpatient Revenue Per Admission	Outpatient Revenue Per Visit	Total Revenue Per Adjusted Admission	Source of Revenue		
								Inpatient	Outpatient	Other
1980	17.8%	19.3%	13.0%	17.7%	14.5%	15.8%	14.2%	83.2%	12.5%	4.3%
1981	18.3	20.8	25.1	18.9	17.3	19.2	17.5	82.7	12.7	4.5
1982	16.2	18.1	13.2	16.3	16.2	16.8	16.0	82.7	12.9	4.4
1983	9.8	14.6	5.5	10.2	10.4	11.5	10.2	82.4	13.4	4.2
1984	4.6	14.0	8.2	6.0	8.6	12.4	8.7	81.3	14.4	4.3
1985	3.6	18.3	12.4	6.1	8.9	13.2	9.2	79.3	16.1	4.6
1986	6.2	17.3	6.5	8.0	8.5	8.3	8.4	78.0	17.5	4.5
1987	8.2	17.1	12.2	10.0	8.9	10.7	9.0	76.8	18.6	4.6
1988	8.1	18.2	16.2	10.3	8.5	11.4	8.8	75.2	20.0	4.8
1989	8.4	16.0	12.6	10.1	9.4	11.5	9.6	74.0	21.0	4.9
1990	8.7	18.4	11.7	10.9	9.2	11.7	9.2	72.6	22.5	5.0
1991	8.2	18.0	7.2	10.3	9.3	12.0	9.2	71.1	24.0	4.8
1992	7.3	15.6	10.1	9.4	8.2	8.6	8.2	69.8	25.4	4.9
1993	5.7	10.6	9.1	7.1	4.9	3.8	5.0	68.9	26.2	5.0
1994	2.5	10.1	9.9	4.9	1.6	2.8	1.9	67.3	27.5	5.2
Averages										
1980-1983	15.5	18.2	14.2	15.8	14.6	15.8	14.5			
1984-1994	6.5	15.8	10.6	8.5	7.8	9.7	7.9			

SOURCE: American Hospital Association National Hospital Panel Survey.

growth in both inpatient revenue per admission and outpatient revenue per visit appears to have moderated. The growth rate for inpatient revenue per admission decelerated to 4.9 percent in 1993, and preliminary data indicate that it slowed down even more in 1994. The growth rate for outpatient revenue per visit slowed to 3.8 percent in 1993, and it also appears to have fallen farther in 1994. Despite this, total outpatient revenue continues to rise by more than 10 percent per year because of increased volume.

Trends in Hospital Expenses and Revenues

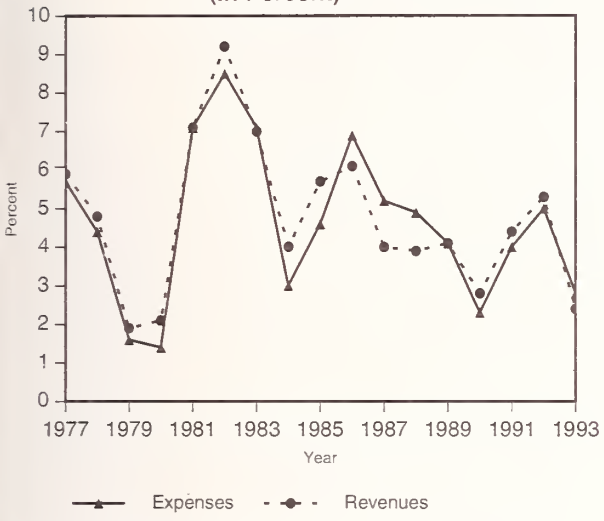
Annual changes in hospital expenses and revenues took a sharp turn downward in 1993, as competitive pressures placed on hospitals from both the public and private sectors began to take hold on the hospital industry. Real growth in hospital revenues per adjusted admission was only 2.4 percent, the lowest it has been since the introduction of PPS (see Figure 2-4). Hospital expenses followed suit with the real change per adjusted admission declining to 2.8 percent. Real growth in expenses and revenues per adjusted admission have always followed each other, and generally have been within a percentage point. However, for adjusted admissions, real revenue growth has tended to exceed real expense growth. Only in 1986 through 1988, and once again in 1993, did expense growth outpace revenue growth.

Total Hospital Margins

The total margin indicates the extent to which hospitals generate sufficient revenues to cover their expenses. It is the difference between total revenues and expenses as a percentage of total revenues. Total expenses include spending for all inpatient and outpatient care as well as for other activities; total revenues include payments from all patients and their insurers as well as receipts from other sources. Because the total margin includes revenues from all payers and costs of all patients, it is the best available measure of overall hospital financial status.[20] Currently, total margins are at or above levels experienced before PPS began.

There has been a cyclical trend in total hospital margins over the past few decades. In 1976, the aggregate total margin was 2.0 percent, reflecting the restrictions of wage and price controls under

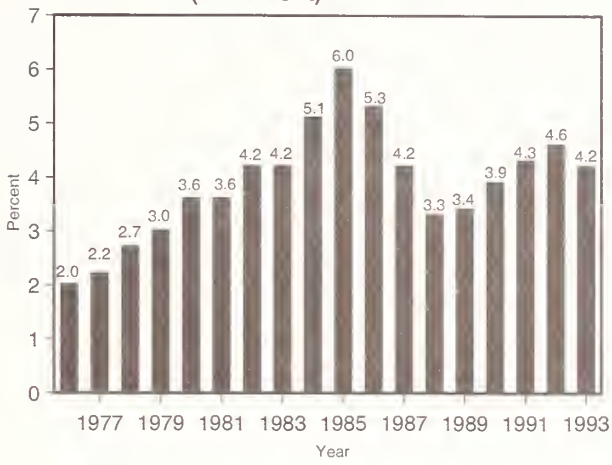
Figure 2-4. Real Change in Total Hospital Expenses and Revenues Per Adjusted Admission, 1977-1993 (In Percent)



Note: Total hospital expenses and revenues deflated by a variant of the consumer price index for all urban consumers (CPI-U-X1).

SOURCE: American Hospital Association Annual Survey of Hospitals.

Figure 2-5. Aggregate Total Margin, 1976-1993 (In Percent)



SOURCE: American Hospital Association Annual Survey of Hospitals.

the Economic Stabilization Program in effect from 1971 to 1974 (see Figure 2-5). Revenues and expenses climbed during the late 1970s, with revenues growing faster, increasing the total margin to 3.6 percent by 1980. Though expenses rose rapidly in the following two years, revenues grew even more rapidly, resulting in a total margin of 4.2 percent by 1982.

The early years of PPS saw a large rise in the aggregate total hospital margin, which peaked at 6.0 percent in 1985. High profits on Medicare cases contributed to this increase. In subsequent years—as Medicare tightened its control over inpatient payment rate increases—the total margin began to fall, dropping to 3.3 percent by 1988. In the late 1980s, this decline leveled off, and the total margin rose to 4.6 percent in 1992. In 1993, despite a decline from the previous year, the total hospital margin of 4.2 percent matched the highest in any year prior to the implementation of PPS.

Distribution of Total Margins by Hospital Group—Overall financial performance has been far from uniform across hospital groups. In the tenth year of PPS, the aggregate total margin for rural hospitals was 0.8 percent higher than that for urban hospitals; the margin for non-teaching facilities exceeded that for major teaching hospitals by 2.1 percent (see Table 2-16). This compares with the first year of PPS, when the aggregate total margin for urban hospitals was 2.7 percentage points higher than for rural hospitals. This gap narrowed steadily before disappearing in the fifth year. Since the sixth year, the aggregate total margin for rural hospitals has exceeded that for urban hospitals.

Hospitals in large urban areas have had a consistently lower aggregate total margin than hospitals in other urban areas. This may reflect the high share of Medicaid and uninsured patients treated in these hospitals. Rural referral centers have had a higher total margin than other rural hospitals. Sole community hospitals had a higher total margin than hospitals in the other rural category in the first four years of PPS, fell behind that group in the fifth and sixth years, and surpassed it again beginning in the seventh year. This change coincided with the implementation of the special provision accorded sole community hospitals enacted in OBRA 1989.

Major teaching hospitals consistently have had a lower aggregate total margin than other teaching or non-teaching hospitals, perhaps reflecting a greater proportion of uncompensated care, particularly among the public hospitals in this group. The total margin for disproportionate share hospitals in large urban areas—whose Medicare payments are adjusted to reflect their treatment of a large proportion of low-income patients—has always been significantly

Table 2-16. Total Hospital Margins, by Hospital Group, First 10 Years of PPS (In Percent)

Hospital Group	PPS 1	PPS 2	PPS 3	PPS 4	PPS 5	PPS 6	PPS 7	PPS 8	PPS 9	PPS 10
All hospitals	7.2%	6.4%	4.3%	3.4%	3.4%	3.5%	3.8%	4.3%	4.2%	4.3%
Urban	7.6	6.7	4.5	3.5	3.4	3.4	3.7	4.2	4.1	4.2
Rural	4.9	4.6	3.0	2.8	3.4	4.0	4.6	5.0	5.1	5.0
Large urban	7.3	6.4	4.0	3.0	2.7	2.6	2.7	3.3	3.4	3.5
Other urban	7.9	7.2	5.4	4.4	4.5	4.9	5.3	5.6	5.2	5.3
Rural referral	7.0	7.8	5.7	4.9	5.6	5.7	6.5	6.6	6.3	6.0
Sole community	4.7	3.5	2.1	2.3	2.1	3.1	3.9	4.8	5.0	5.3
Other rural	3.9	3.2	1.7	1.7	2.5	3.3	3.6	4.1	4.3	4.2
Major teaching	4.7	5.1	2.5	2.3	2.2	1.7	1.9	3.0	3.2	2.7
Other teaching	8.3	7.3	5.4	4.0	3.9	4.2	4.2	4.5	4.2	4.6
Non-teaching	7.2	6.3	4.4	3.6	3.6	3.8	4.4	4.7	4.7	4.8
Disproportionate share:										
Large urban	6.4	5.5	3.0	2.0	1.9	1.7	1.6	2.6	2.8	3.0
Other urban	7.5	6.9	5.1	4.2	4.3	4.8	5.2	5.8	5.3	5.3
Rural	5.4	5.2	2.7	2.9	3.6	4.2	5.2	7.1	6.7	5.7
Non-disproportionate share	7.7	6.9	5.1	4.3	4.2	4.2	4.7	4.6	4.5	4.7
Payment adjustments:										
IME and DSH	6.3	5.8	3.4	2.6	2.6	2.8	2.6	3.5	3.6	3.5
IME only	9.0	8.3	6.3	5.0	4.8	4.2	4.9	4.9	4.2	4.8
DSH only	7.5	6.5	4.4	3.2	3.3	3.4	4.2	5.1	4.8	5.0
No IME or DSH	7.0	6.2	4.4	3.8	3.8	4.1	4.6	4.4	4.7	4.6
Voluntary	7.6	6.8	4.7	3.6	3.6	3.6	3.9	4.2	3.9	4.1
Proprietary	8.4	7.2	5.2	4.7	3.8	3.0	3.9	5.3	5.7	6.4
Urban government	4.3	4.2	1.6	2.1	2.0	3.3	3.2	3.5	4.8	4.3
Rural government	4.3	3.2	2.1	1.3	2.3	2.8	3.8	4.8	5.2	4.4

Note: Data for each PPS year are from hospital cost reporting periods beginning during that Federal fiscal year. For instance, PPS 1 data are from hospitals' cost reports beginning during the first year of PPS (fiscal year 1984). Excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning with PPS 3 and New Jersey beginning with PPS 6. IME = indirect medical education. DSH = disproportionate share.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

below average. This difference rose annually through the seventh year of PPS, but narrowed beginning with the eighth year, probably reflecting increases in both Medicare and Medicaid disproportionate share payments.

Some hospitals receive Medicare payments adjusted for teaching status, disproportionate share status, or both. Hospitals receiving both IME and DSH payments have consistently had a below-average aggregate total margin. In the first seven years of PPS, teaching hospitals that did not get DSH payments had the highest total margin of any hospital group. By the eighth year, disproportionate share hospitals that did not receive IME payments had the highest margin, possibly because of more generous Medicaid disproportionate share payments. In the tenth year, these hospitals continued to have a higher aggregate total margin than other hospitals.

Voluntary hospitals had a lower aggregate total margin than both urban and rural government hospitals in the tenth year of PPS. Proprietary hospitals, however, had the highest aggregate total margin of any hospital group, perhaps reflecting their greater control over costs. By the tenth year, their total margin was 2.1 percentage points above the nationwide margin.

Distribution of Total Margins Within Hospital Groups—As is the case with the PPS margins discussed above, total margins vary widely among individual hospitals within any group. This variation has become more pronounced over time, although patterns vary across hospital groups. By the tenth year

Table 2-17. Distribution of Total Hospital Margins, by Hospital Group, Tenth Year of PPS (In Percent)

Hospital Group	Percentile			Percent with Negative Total Margin
	25th	Median	75th	
All hospitals	0.1%	3 .7%	7.4%	23.8%
Urban	0.1	3.5	7.2	23.0
Rural	0.0	3.9	7.8	24.7
Large urban	-0.2	3.0	6.6	25.5
Other urban	0.7	4.1	7.6	20.1
Rural referral	3.0	5.8	8.7	8.7
Sole community	-0.2	4.1	8.8	25.9
Other rural	-0.5	3.6	7.0	26.5
Major teaching	0.1	2.2	4.9	23.2
Other teaching	0.5	3.9	7.1	19.9
Non-teaching	0.0	3.8	7.6	24.6
Disproportionate share:				
Large urban	-0.5	2.5	6.1	27.9
Other urban	1.3	4.3	8.0	16.3
Rural	0.3	4.4	8.3	23.6
Non-disproportionate share	0.0	3.7	7.4	24.4
Payment adjustments:				
IME and DSH	0.1	3.2	6.6	22.3
IME only	0.8	4.0	7.1	17.9
DSH only	0.3	4.0	8.0	22.9
No IME or DSH	-0.1	3.7	7.4	25.3
Voluntary	0.3	3.6	6.8	22.2
Proprietary	-1.2	4.9	10.6	29.0
Urban government	0.4	3.6	7.1	20.9
Rural government	-0.7	4.0	8.2	27.5

Note: Excludes hospitals in Maryland. IME = indirect medical education. DSH = disproportionate share.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

of PPS, 23.8 percent of all hospitals had negative total margins; however, one of every four had a total margin greater than 7.4 percent (see Table 2-17).

The distribution of total margins within the urban and rural groups at first appears inconsistent with the aggregate total margins cited above. Although rural hospitals as a group had a higher aggregate total margin than urban facilities, more rural than urban hospitals had a negative total margin (24.7 percent compared with 23.0 percent). These results reflect the fact that a large number of small rural hospitals have low total margins. Both the smallest urban and rural hospitals have had low margins. However, the smallest sized group accounts for about half of all rural hospitals, while it accounts for only about one-fifth of urban facilities.

The median total margin for hospitals in large urban areas was more than one percentage point below that for other urban hospitals, and they were more than 25 percent likelier to have negative total margins. Rural referral centers, on the other hand, had the highest median total margin of any hospital group; fewer than 9 percent had negative margins. Sole community hospitals had higher median total margins, but their margins were more likely to be negative.

Another apparent contradiction is the case of major teaching hospitals. Although as a group they had significantly lower total margins than non-teaching facilities, they were also less likely to have negative margins. Few major teaching hospitals had especially high total margins, but not many had very low margins either. This may reflect the

fact that teaching hospitals are more likely to receive public support for their teaching activity and special patient care services (such as uncompensated care). However, disproportionate share hospitals in large urban areas—many of which are major teaching hospitals—not only had lower total margins, but also were far more likely than other groups to have negative margins.

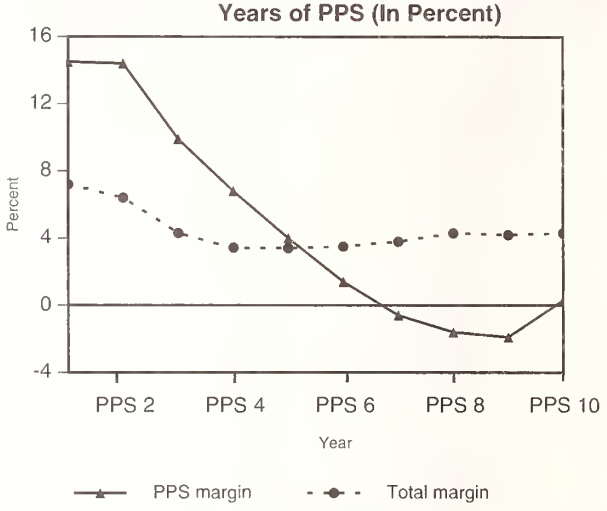
The distribution of total margins among proprietary hospitals reflects the higher financial returns they experience and the greater risks they face. In the tenth year of PPS, the median total margin for these hospitals was 1.2 percentage points above the national median; the total margin for one in every four was over 10.6 percent. However, compared with voluntary hospitals, proprietary hospitals were somewhat likelier to have negative margins.

Cost Shifting

Despite attempts by some payers (notably Medicare and Medicaid) to slow down spending by constraining their payment rates, hospitals have managed to maintain reasonably stable total margins. Moreover, at least until recently, this has occurred while costs have continued to rise. With the resulting losses from public payers added to the burden of caring for the uninsured, hospitals have engaged in cost shifting, or obtaining private sector revenues that exceed costs, to maintain their financial health. Profits from activities unrelated to patient care also contribute to total margins.

PPS and Total Margins—Both PPS and total margins are far lower now than they were in the early days of prospective payment. But PPS margins have fallen farther than total margins (see Figure 2-6). For the first two years after PPS went into effect, the aggregate PPS margin was much higher than the total margin. By the sixth year, these had reversed. While the total margin has improved somewhat since then, the PPS margin fell below zero. By the ninth year of PPS, the total margin was 6.1 percentage points higher than the PPS margin. (This compares with the first year of PPS, when the total margin was 7.3 percentage points below the PPS margin.) Although the discrepancy between the two types of margins diminished markedly in the tenth year, the pattern suggests that relative to costs, revenue from other payers went up faster than Medicare payments over the decade.

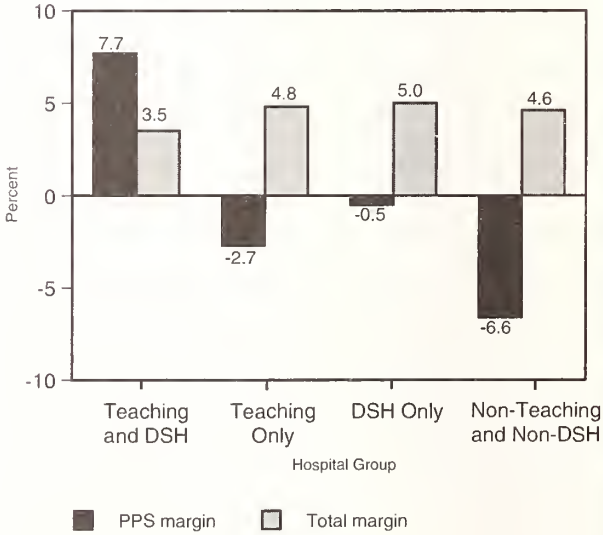
Figure 2-6. PPS and Total Margins, First 10 Years of PPS (In Percent)



SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

The PPS and total margins for various types of hospitals are substantially different, and the relationship between the two margins varies across the groups. The effects of IME and DSH payments illustrate this (see Figure 2-7). In the tenth year of PPS, hospitals that received neither payment adjustment had an aggregate total margin that was

Figure 2-7. PPS and Total Margins for Selected Hospital Groups, Tenth Year of PPS (In Percent)



Note: DSH = disproportionate share.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

11.2 percentage points higher than their PPS margin. By contrast, hospitals that got both IME and DSH payments had much higher PPS margins than those that did not. Further, their total margin was 4.2 percentage points lower than their PPS margin. Apparently, hospitals that did not receive these payment adjustments covered losses on Medicare cases with revenue from other patients, while those that got both payment adjustments used these to offset lower net revenues from other payers.

Hospital Financial Status and Cost Shifting— The data on PPS and total margins raise the question of how the costs of uncompensated care and revenues from Medicare, Medicaid, and other payers are related. Hospitals must find ways to cover costs that exceed payments related to caring for Medicare and Medicaid patients. They must also finance the cost of uncompensated care. That the aggregate total margin was high even though losses on these patients were growing indicates that hospitals recovered these losses through higher payments for the privately insured, that is, through cost shifting. However, various hospital groups (and subsets of these groups) varied in their ability to cost shift.

To better understand this phenomenon entails examining the gains and losses for different hospital groups by type of payer.[21] In 1993, losses owing to care for Medicare and Medicaid patients, as well as uncompensated care, were 9.8 percent of total hospital costs (see Table 2-18). Even with a slight surplus in payment from other government sources, private payer payments would have had to be 26 percent higher than costs to cover these losses. In fact, private payments exceeded costs by 29 percent. Combined with revenues from sources other than patient care, these payments resulted in a 4.4 percent aggregate gain.[22]

Various factors are responsible for the marked differences seen in total hospital margins. Hospital groups vary in terms of the Medicare, Medicaid, and uncompensated care losses they incur; the share of their costs attributable to private-pay patients; and the extent to which their payments from private insurers exceed costs.

The contrast between public major teaching hospitals and non-teaching hospitals is particularly striking. Public major teaching hospitals in 1993 received substantial adjustments to their Medicare inpatient payments, resulting in a relatively small loss from Medicare. Additionally, their payments from Medicaid substantially exceeded their costs. However, losses from uncompensated care were more than 80 percent higher than losses faced by other groups, including private major teaching hospitals. Further, these hospitals had a relatively small share of private-pay patients, and the percentage gain from private insurers was much smaller than for other hospitals. Consequently, for public major teaching hospitals, the private payer percentage gain was only about a third of that for non-teaching institutions. Their aggregate total gain was only 2.7 percent in 1993, compared with 5.4 percent for non-teaching hospitals.

As for hospitals in large urban areas, compared with other groups their losses from Medicare were lower but those from Medicaid were higher. While the share of private payer payments to large urban hospitals was larger than that for rural hospitals, these payments were 25 percent above costs, compared to 37 percent for the rural group. As a result, hospitals in large urban areas had a total gain of 3.6 percent; their rural counterparts' total gain was 5.3 percent.

Ownership category also affects hospital financial status. Urban government hospitals lose the least on Medicare payments (about two-thirds of the nationwide aggregate figures). In addition, they are the only group to show gains from Medicaid payments. However, they have by far the largest share of losses from uncompensated care and, primarily because of the small proportion of privately insured served by these hospitals, they have substantially smaller gains from private payers. As a result, their total gain is 0.8 percentage points lower than the national aggregate. The highest gain is for proprietary hospitals, which results from exceptionally high gains from private payers and lower than average losses from uncompensated care.

CONCLUSIONS

Overall, hospitals have maintained a stable financial position since implementation of prospective payment, reflected in total margins that have varied by less than one percentage point since the third year of PPS. They realized a positive aggregate operating margin on Medicare inpatient cases in the tenth year of PPS and are expected to have positive PPS margins in the current year as well.

Table 2-18. Gains or Losses by Payer, by Hospital Group, 1993 (In Percent)

Hospital Group	Aggregate Total Gain	Gains or Losses as a Percentage of Total Costs						Private Payers	
		Medicare[a]	Medicaid[a]	Other Government Payers and Subsidies[b]	Uncompensated Care[b]	Private	Non-Patient	Share of Total Costs	Payment to Cost Ratio
All community hospitals	4.4%	-4.1%	-0.9%	0.2%	-4.8%	10.9%	3.3%	37.0%	129.3%
Large urban	3.6	-3.6	-1.1	0.2	-4.8	9.4	3.6	37.9	124.9
Other urban	5.6	-4.8	-0.7	0.2	-4.9	12.8	3.0	36.8	134.7
Rural	5.3	-4.8	-0.8	0.5	-4.7	12.3	2.8	33.4	136.8
Major teaching, public	2.7	-2.0	3.4	1.0	-8.2	4.8	3.6	22.5	121.3
Major teaching, non-public	3.1	-2.8	-1.0	0.2	-4.6	7.1	4.2	38.3	118.5
Other teaching	4.4	-4.6	-1.0	0.1	-4.6	11.0	3.4	38.4	128.7
Non-teaching	5.4	-5.3	-1.4	0.2	-4.5	13.6	2.7	37.2	136.6
Disproportionate share:									
Large urban	3.0	-3.1	-1.0	0.3	-5.4	8.4	3.8	33.5	125.1
Other urban	5.8	-4.2	-0.2	0.2	-5.7	12.6	3.1	34.8	136.3
Rural	6.4	-4.3	-0.4	0.4	-5.8	13.7	2.8	30.9	144.3
Non-disproportionate share	4.8	-5.6	-1.0	0.2	-3.8	12.2	3.0	40.3	130.1
Voluntary	4.2	-4.3	-1.4	0.1	-4.5	10.8	3.5	38.9	127.7
Proprietary	8.0	-4.5	-1.0	0.2	-3.7	15.8	1.1	38.8	140.8
Urban government	3.6	-2.9	1.3	0.3	-7.1	8.3	3.8	27.1	130.6
Rural government	4.5	-5.3	-0.5	1.1	-4.5	10.7	3.0	31.4	134.1

Note: Due to reporting inconsistencies related to Medicaid disproportionate share hospital payments and provider-specific taxes, there are significant margins of error for the numbers related to all payers in 1993.

[a] Medicare and Medicaid costs equal all costs, both inpatient and outpatient, attributed by hospitals to these programs' patients regardless of whether the costs are allowable (and therefore reimbursable) by the programs.

[b] Operating subsidies from state and local governments were considered as payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Additional subsidies above this level were counted as separate revenue.

SOURCE: ProPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

As costs have increased, private and government payers have acted to curb the growth in their expenditures. The private sector has generally relied on managed care techniques, while the Congress has kept the update of PPS payment rates lower than the rate of increase in input costs.

Hospitals have dealt with limited payment rate increases and other pressures in a number of ways. When costs of some patients have exceeded related payments, hospitals have subsidized this care through higher revenues from other payers. More recently they have taken actions to reduce cost growth, primarily by slowing labor cost growth. Cost growth slowed sharply in the tenth year of PPS, following two years of moderating increases.

Revenue from Medicare has increased as hospitals have treated more complex patients who are paid for at higher rates. Hospitals have also gradually changed the mix of services they offer. Inpatient care has become less important as the share of revenues obtained from outpatient activity has increased. Hospital costs are affected by numerous factors, including actions of private payers. Nonetheless, Medicare policy has played and will continue to play a significant role in hospital payment.

Notes to Chapter 2

1. Until fiscal year 1995, hospitals were classified into three groups for purposes of the standardized payment amount: large urban, other urban (hospitals in MSAs with population under one million), and rural (hospitals not in MSAs). From fiscal year 1995 on there will be two groups for purposes of standardized payment amounts: large urban and other. Hospitals that are not located in large urban areas may be reclassified as large urban by the MGCRB if they meet certain criteria. They then are eligible for the higher large urban standardized payment amount.

2. The wage index is applied to the labor-related portion (71.4 percent) of the standardized payment amount. For hospitals in Alaska and Hawaii, a cost of living adjustment is applied to the non-labor-related portion (28.6 percent) of the standardized payment amount. Hospitals also may be reclassified by the MGCRB for purposes of the wage index into an area in which they are not physically located.

3. In this and all other tables in this chapter, although reclassification decisions by the MGCRB are reflected in computing payments for each hospital, hospitals are grouped based on their geographic location, rather than their payment status.

4. For data on the annual change in the CMI, see ProPAC's *Report and Recommendations to the Congress, March 1, 1995*, 82.

5. This weighting factor, however, applies only to the direct graduate medical education payment and not to the count of residents used in the IME adjustment.

6. This is an estimate of the average total per-resident payment amount. Medicare pays only its share of the hospital-specific amount for each resident.

7. The estimate of the number of residents in 1994 is from the Bureau of Health Professions. Data on increases from 1988 and 1992 are from the *Journal of the American Medical Association*, Annual Medical Education Issues 270(9):1120-21, September 1, 1993 and 272(9):729-30, September 7, 1994. These counts include residents training in military, Veterans Affairs, and other settings where Medicare does not participate.

8. Gwendylon Johnson, board member, American Nurses Association, in testimony before the Subcommittee on Health, Committee on Ways and Means, U.S. House of Representatives, Washington, DC, March 23, 1995.

9. Department of Health and Human Services, *Report to Congress: Medicare Hospital Outpatient Prospective Payment*, March 1995.

10. Ibid., Technical Appendix, 5. The HCFA analysis uses data from 1990 and 1991 to simulate payments and costs for rules in effect in 1993.

11. These data come from the Bureau of Labor Statistics. Based on a survey of private and state and local government hospitals, they refer to the number of people employed. These data differ from information in the American Hospital Association's (AHA) Annual Survey of Hospitals. The AHA data measure FTEs employed and are based on all community hospitals that respond to AHA's annual survey.

12. Kay Anderson and Barbara Wooton, "Changes in Hospital Staffing Patterns," *Monthly Labor Review* 114(3):3-9, March 1991; Barbara Wooton and Laura T. Ross, "Hospital Staffing Patterns in Urban and Non-Urban Areas," *Monthly Labor Review* 118(3):23-33, March 1995.

13. Data Resources, Inc., *Health Care Costs*, Third Quarter 1994. The numbers in the text are direct comparisons of the price index values in the market basket. They do not consider changes in the quality or mix of inputs purchased by hospitals.

14. The data in Figure 2-3 and the discussion in the

text include the value of bonds issued for combined new capital and refunding purposes with bonds issued solely for refunding. The latter decreased by 77 percent in 1994.

15. Michael Grossman and others, "Determinants of Interest Rates on Tax-Exempt Hospital Bonds," *Journal of Health Economics* 12(4):385-410, December 1993.

16. Milbank Memorial Fund, "Nonprofit Organizations' Access to Capital During Health Reform," unpublished paper, April 1994; Karen Polano, "Network Formation May Be Cooled By Rapidly Rising Capital Costs," *Modern Health Care* 24(10):77-86, March 7, 1994.

17. Council of Economic Advisers, *Economic Report of the President: 1995* (Washington, DC: U.S. Government Printing Office, 1995); William J. Baumol, Sue Anne Batey Blackman, and Edward N. Wolff, *Productivity and American Leadership* (Cambridge, MA: MIT Press, 1989)117-18.

18. For a more detailed discussion of these productivity measures, see ProPAC's March 1, 1995, *Report and Recommendations to the Congress*.

19. Richard M. Scheffler and others, "The Hospital Response to Medicare's Prospective Payment System: An Econometric Model of Blue Cross and Blue Shield Plans," *Medical Care* 32(5):471-85, May 1994.

20. The discussion of trends in total margins is based on data from the AHA's Annual Survey of Hospitals. The distribution of total margins across hospital groups under PPS is described using data from the Medicare Cost Reports submitted to HCFA. The AHA and HCFA data may differ slightly because they are derived from different sources and cover different reporting periods. They are generally comparable, however, and the cost report data are useful in indicating trends across hospital groups. The Medicare Cost Report data also are used to describe the distribution of total margins within hospital groups.

21. The AHA conducted a special analysis of data from the Annual Survey of Hospitals for ProPAC.

22. Aggregate total gains may differ from total margins for two reasons. First, the gains are calculated by taking net revenues as a percentage of total costs, rather than as a percentage of total revenues; this is done so that the gain or loss by payer can be summed over all payers. Second, the source of the data—the AHA's Annual Survey of Hospitals—differs somewhat from the Medicare Cost Reports, both in the data reported and in the period covered by the data.

Chapter 3

Health Care Use and Insurance Coverage

Chapter 3

Health Care Use and Insurance Coverage

Health care utilization is heavily influenced by the type and level of insurance coverage an individual has. The three primary payers—Medicare, Medicaid, and private sector employers—each offers different types of coverage that reflect the needs of its enrollees. All three payers have experienced substantial increases in the cost of insuring their enrollees and have incorporated some aspects of managed care to stem this growth. Although fee-for-service (FFS) coverage continues to dominate in the public sector, the proportion of Medicare and Medicaid enrollees joining managed care plans is escalating. In the private sector, many employers are offering managed care products such as health maintenance organizations (HMOs), preferred provider organizations (PPOs), or point-of-service (POS) options to contain costs. Many payers that still offer fee-for-service coverage are incorporating utilization management techniques and negotiating discounted prices. These changing insurance practices, coupled with evolving technologies, are affecting provider practice patterns. The use of inpatient hospital services is declining as more care is provided in post-acute and ambulatory settings. This is true for enrollees in the Medicare and Medicaid programs, as well as for the privately insured.

This chapter documents variations in service use and trends in insurance coverage. Included are descriptions of utilization and expenditures for Medicare beneficiaries, Medicaid recipients, and the privately insured. The influence of HMOs on service use levels and associated payments is discussed. The implications of these changes for enrollees' access to services and quality of care are also considered.

MEDICARE

The Medicare program provides health insurance coverage for the elderly and certain disabled populations. Medicare Hospital Insurance, or Part A, finances inpatient hospital care, which may be furnished in acute, rehabilitation, psychiatric, cancer, or children's hospitals. It also covers skilled nursing facility (SNF), home health agency (HHA), and hospice care. Supplementary Medical Insurance, or Part B, pays for physician services; various outpatient services, including those provided by hospitals, outpatient rehabilitation facilities, independent therapists and laboratories, and outpatient dialysis centers; and durable medical equipment and supplies.

Eligibility for Medicare Part A is based on age or disability status, with special provisions for individuals having end-stage renal disease (ESRD). People who are 65 and over and receive cash benefits under Social Security (including railroad retirement beneficiaries) are automatically eligible for Part A benefits and pay no premiums. The small number of elderly who are not automatically eligible can purchase Part A coverage. People of any age with a permanent total disability who have qualified for Social Security disability benefits for at least 24 months can receive Part A coverage at no charge. Anyone requiring chronic kidney dialysis or a kidney transplant to maintain life is also eligible.

Medicare Part B is open to everyone eligible for Part A. Enrollees pay a premium of $46.10 per month in 1995. Although Part B is a voluntary program, nearly all eligible elderly and disabled people elect to participate. Those with ESRD have a particular incentive to purchase Part B because it covers outpatient dialysis. A small proportion of Part B enrollees (2 percent) do not have Part A coverage.

Medicare Enrollees

Some 36.9 million people were enrolled in Medicare in 1994 (see Table 3-1). Almost 90 percent

Table 3-1. Total Medicare Enrollment, Fiscal Years 1983-1994 (In Millions)

Fiscal Year	Number of People		
	Total	Aged	Under 65[a]
1983	29.9	26.9	3.0
1984	30.4	27.4	2.9
1985	31.0	28.0	2.9
1986	31.6	28.6	3.0
1987	32.2	29.2	3.0
1988	32.9	29.7	3.1
1989	33.5	30.3	3.2
1990	34.1	30.8	3.3
1991	34.8	31.4	3.5
1992	35.5	31.9	3.6
1993[b]	36.2	32.4	3.9
1994[b]	36.9	32.8	4.2

Note: Rows may not sum to the total due to rounding.

[a] The under 65 group includes the disabled and end-stage renal disease populations.

[b] Estimated.

SOURCE: Health Care Financing Administration, Office of the Actuary.

were eligible because of age; they represent about 96 percent of the total elderly population.[1] The rest qualify because they are disabled or have ESRD.

Medicare's two populations, those 65 and over and those under 65, differ markedly from each other. Whereas the older group is primarily female, white, and considers itself to be healthy, the younger population has a larger percentage of males, blacks, and perceives itself to be sicker. That is because the younger group, made up of disabled beneficiaries and persons with ESRD, qualifies for Medicare on the basis of illness, rather than age; they also tend to have more difficulties with activities of daily living, such as bathing and dressing.[2]

A growing share of beneficiaries under 65 qualify because of ESRD. Though still a relatively small proportion of all beneficiaries, ESRD enrollees have increased from 0.3 percent of the total Medicare population in 1985 to an estimated 0.6 percent in 1994 (see Table 3-2). These beneficiaries tend to use costlier services and thus incur higher expenditures per person than the average beneficiary. Program payments per person in 1994 were almost nine times greater for beneficiaries qualifying due to ESRD than for other enrollees. Total expenditures for care delivered to ESRD beneficiaries rose from 3.8 percent of total program payments in 1985 ($2.7 billion) to 5.0 percent in 1994 ($8.3 billion).

Table 3-2. Estimated Growth in Payments for End-Stage Renal Disease Beneficiaries, 1985-1994

Year	Number of Beneficiaries (In Thousands)*	Total Payments (In Millions)	Payments Per Person
1985	95	$2,675	$28,158
1986	104	3,126	30,058
1987	114	3,452	30,281
1988	124	3,946	31,823
1989	135	4,674	34,622
1990	148	5,212	35,216
1991	162	5,877	36,278
1992	179	6,799	37,983
1993	195	7,548	38,708
1994	211	8,320	39,431

* Based on mid-year enrollments.

SOURCE: Health Care Financing Administration, Office of the Actuary.

Program Spending and Use of Services

Total Medicare program payments in 1994 were estimated at $166 billion, an average of $4,500 per enrollee (see Table 3-3). Part A payments increased by 11 percent over the previous year, fueled by the rapid growth in post-acute care services. Part B payments grew more than 12 percent between 1993 and 1994, reflecting similar increases in both physician and outpatient payments.

Beneficiaries, either through out-of-pocket payments or supplemental insurance coverage, contributed an additional $31.4 billion in copayments and deductibles, bringing the total payments to providers for Medicare-covered services to almost $200 billion in 1994 (see Table 3-4). Including the $13.1 billion in Part B premiums paid by enrollees, individual costs to the beneficiary averaged $1,205 per person.[3]

Changes in the types of benefits used by enrollees are reflected in the distribution of program payments (see Figure 3-1). Inpatient hospital use, the costliest program component, steadily declined from 61 percent of all program payments in 1986 to 50 percent in 1994. By contrast, payments for SNF and HHA services account for a growing share of the total.

Hospital Inpatient Services—The shift away from inpatient hospital care is evident in both payment and utilization. Even though total inpatient hospital payments continued to climb, the annual rate of growth fell from 12.0 percent between 1983

Table 3-3. Estimated Medicare Program Payments, 1983-1994

Year	Total Program		Part A		Part B	
	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change
1983	$ 58.0	—	$ 39.9	—	$18.2	—
1984	65.0	12.1%	44.7	12.2%	20.3	12.0%
1985	70.3	8.1	47.4	6.0	22.9	12.5
1986	75.7	7.8	49.1	3.6	26.6	16.4
1987	80.5	6.3	49.7	1.2	30.8	15.7
1988	88.5	10.0	53.9	8.4	34.6	12.4
1989	99.8	12.8	61.6	14.3	38.2	10.3
1990	109.0	9.2	66.4	7.8	42.5	11.3
1991	121.2	11.2	74.6	12.3	46.6	9.5
1992	134.2	10.7	85.0	13.3	50.0	6.6
1993	149.1	11.1	95.1	12.5	54.0	8.7
1994	166.1	11.4	105.5	10.9	60.7	12.4

Note: Payments reported here are incurred expenditures rather than outlays and do not include beneficiary copayments.

SOURCE: Health Care Financing Administration, Office of the Actuary.

and 1984 to 7.5 percent between 1993 and 1994 (see Table 3-5). This lower growth was partly because fewer people used inpatient hospital services. Hospital discharges dropped from 388 per 1,000 enrollees in 1983 to 309 per 1,000 enrollees in 1994 (see Table 3-6). The average length of stay also decreased from almost 10 days to eight days during this period.

The decline in inpatient payments and utilization has occurred for two reasons. Medicare's use of a prospective payment system (PPS) for inpatient care has moderated its payment growth. (For more information on PPS, see Chapter 2.) In addition, changes in technology have allowed complex procedures to be delivered in other settings. As a result, fewer people are being admitted to the hospital and, once there, they are not staying as long.

Post-Acute Care—The use of post-acute care, including SNF and HHA services, has accelerated, particularly since 1989. Medicare payments to rehabilitation hospitals, which often provide post-acute services, increased from $2.3 billion in 1991

Table 3-4. Estimated Beneficiary Liabilities, 1985-1994

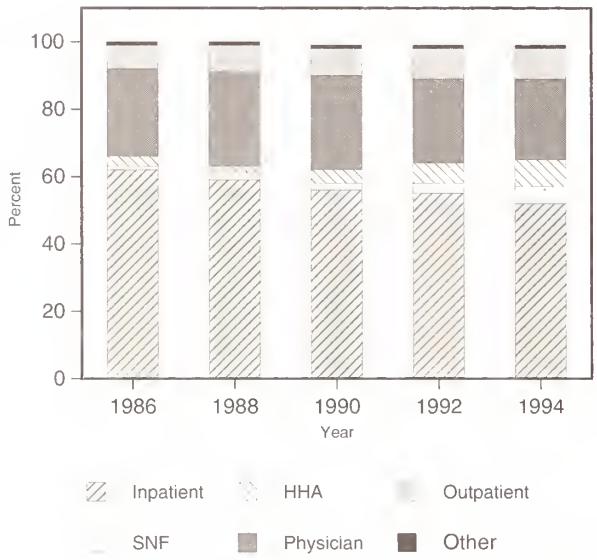
Year	Total Medicare			Inpatient Hospital		Other Medicare	
	Beneficiary Liability (In Billions)[a]	Program Payments (In Billions)	Beneficiary Share of Total Payments[b]	Beneficiary Liability (In Billions)	Beneficiary Share	Beneficiary Liability (In Billions)	Beneficiary Share
1985	$13.5	$ 70.3	16.2%	$3.4	7.0%	$10.2	28.6%
1986	15.4	75.7	16.9	4.1	8.2	11.3	27.9
1987	16.8	80.5	17.2	4.5	8.8	12.3	26.8
1988	18.0	88.5	16.9	4.8	8.6	13.2	25.9
1989	17.4	99.8	14.8	3.6	6.0	13.8	23.7
1990	21.4	109.0	16.4	5.3	8.1	16.1	24.7
1991	22.7	121.2	15.8	6.0	8.3	16.8	23.2
1992	23.4	134.2	14.8	6.3	8.2	17.0	21.3
1993	30.6	149.1	17.0	6.7	8.0	23.9	24.9
1994	31.4	166.1	15.9	7.1	7.9	24.3	22.6

[a] Beneficiary liabilities include Part A and Part B liabilities plus the additional amount physicians may charge for unassigned claims. They exclude $13.1 billion in premium payments, which are paid by the program.

[b] Total payments include program payments and beneficiary liabilities.

SOURCE: Health Care Financing Administration, Office of the Actuary and Office of Quality and Evaluation.

Figure 3-1. Medicare Payments for Selected Services as a Share of Total Program Payments (In Percent)



Note: Inpatient = inpatient hospital. SNF = skilled nursing facility. HHA = home health agency. Outpatient = oupatient services provided by a hospital outpatient department, free-standing end-stage renal disease facility, SNF, comprehensive outpatient rehabilitation facility, rural health clinic, and federally qualified health center. Other = independent laboratories and Medicare Part B group prepayment plan payments.

SOURCE: Health Care Financing Administration, Office of the Actuary.

to $3.9 billion in 1994. Payments for SNF services grew from $500 million in 1983 to an estimated $8.3 billion in 1994, an average annual growth rate of 29 percent. This average, however, masks the drastic swings in spending for this benefit. Most notably, between 1988 and 1989, payments increased by 276 percent and subsequently declined by 29 percent. Since then, spending growth has averaged 35 percent a year, although it is not expected to remain that high in future years.

Much of the growth in SNF program spending between 1987 and 1990 was attributable to policy changes that allowed more people to use more services. In the late 1980s, SNF coverage guidelines were altered to reduce the number of payment denials and increase the consistency of fiscal intermediaries' decisions. In addition, the Medicare Catastrophic Coverage Act (MCCA) of 1988 reduced the copayments and removed the three-day prehospitalization requirement. Together, these coverage changes allowed more beneficiaries to qualify for the skilled nursing benefit. At the same time, small rural hospitals were expanding the number of swing beds to provide post-acute services. Between 1988 and 1989, the number of enrollees served rose from 12 per 1,000 to 19 per 1,000, while usage levels increased from 28 to 47 days per person served (see Table 3-7).

Following the repeal of MCCA in 1990, growth in the number of people using SNF services and the number of days per user slowed down. However, payments for this benefit continued to increase at

Table 3-5. Estimated Medicare Part A Program Payments, by Type of Service, 1983-1994

Year	Inpatient Hospital		Skilled Nursing Facility		Home Health Agency[a]		Hospice	
	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change
1983	$37.8	—	$0.5	—	$ 1.6	—	$0.0	—
1984	42.3	12.0%	0.6	6.9%	1.9	17.5%	b	—
1985	44.9	6.1	0.6	2.9	1.9	4.0	b	—
1986	46.5	3.8	0.6	0.2	1.9	-0.5	0.1	79.1%
1987	47.1	1.2	0.6	8.8	1.9	-1.2	0.1	45.5
1988	50.8	7.9	0.9	47.1	2.1	8.6	0.2	39.3
1989	55.4	9.1	3.5	275.7	2.6	23.8	0.2	52.6
1990	59.7	7.9	2.5	-29.0	3.9	53.2	0.4	50.4
1991	65.5	9.7	2.9	18.4	5.7	44.2	0.6	56.7
1992	71.3	8.8	4.5	55.3	7.9	39.5	0.8	50.8
1993	77.0	8.0	6.5	42.8	10.7	34.6	1.1	25.2
1994	82.8	7.5	8.3	28.5	13.0	22.1	1.4	34.5

Note: Payments reported here are incurred expenditures rather than outlays and do not include beneficiary copayments.

[a] Includes the relatively small amount of Part B home health agency expenditures.

[b] Payments were $8 million in 1984 and $43 million in 1985.

SOURCE: Health Care Financing Administration, Office of the Actuary.

Table 3-6. Medicare Hospital Utilization and Payments Per Discharge, 1983-1994

Year	Number of Discharges Per 1,000 Enrollees	Total Days of Care Per 1,000 Enrollees	Average Length of Stay (In Days)	Hospital Payments Per Discharge	
				Amount	Percent Change
1983	388	3,842	9.9	$3,256	—
1984	374	3,356	9.0	3,723	14.3%
1985	345	3,015	8.7	4,200	12.8
1986	327	2,880	8.8	4,508	7.4
1987	316	2,854	9.0	4,628	2.7
1988	310	2,781	9.0	4,980	7.6
1989	300	2,731	9.1	5,504	10.5
1990	300	2,680	8.9	5,829	5.9
1991	301	2,625	8.7	6,254	7.3
1992	303	2,560	8.5	6,628	6.0
1993	304	2,437	8.0	6,989	5.4
1994*	309	2,473	8.0	7,261	3.9

* Estimated.

SOURCE: Health Care Financing Administration, Office of the Actuary.

double-digit rates, rising 29 percent between 1993 and 1994. Average payment per day has gone up more than 20 percent annually since 1991. This large annual increase suggests that the service mix is changing to include more ancillary services, for which SNFs are paid unlimited costs in addition to the limited payments for routine services.

Home health payments have also accelerated, climbing from 2.7 percent of total Medicare payments in 1985 to 7.8 percent in 1994. Much of this upswing is due to increases in the number of people served and the number of visits per person, while the average payment per visit has remained relatively stable (see Table 3-8). Unlike most other Medicare benefits, beneficiaries are not responsible for any copayments or deductibles for this service.

Growth has been greatest since 1989, when concern over the high rate of denials led to revised interpretations of Medicare coverage guidelines. These revisions allowed beneficiaries who needed part-time care (less than eight hours a day) *or*

Table 3-7. Medicare Skilled Nursing Facility Utilization and Payments Per Person Served, 1983-1994

Year	People Served		Days		Payments Per Day	
	Number (In Thousands)	Per 1,000 Enrollees	Number (In Thousands)	Per Person Served	Amount	Percent Change
1983	265	9	9,314	35.1	$ 56	—
1984	299	10	9,640	32.2	58	3.2%
1985	314	10	8,927	28.4	65	11.1
1986	304	10	8,160	26.8	71	9.6
1987	293	9	7,445	25.4	84	19.3
1988	384	12	10,667	27.8	87	2.6
1989	636	19	29,780	46.8	117	34.6
1990	638	19	25,200	39.5	98	-16.1
1991	671	20	23,700	35.3	123	25.9
1992	785	22	28,960	36.9	157	27.1
1993	870	24	34,437	39.6	188	20.1
1994*	925	25	36,865	39.9	226	20.0

* Estimated.

SOURCE: Health Care Financing Administration, Office of the Actuary.

Table 3-8. Medicare Home Health Care Utilization and Payments Per Visit, 1983-1994

Year of Service	People Served		Visits			Payments Per Visit	
	Number (In Thousands)	Per 1,000 Enrollees	Number (In Thousands)	Per 1,000 Enrollees	Per Person Served	Amount	Percent Change
1983	1,318	45	36,898	1,234	28	$43	—
1984	1,498	50	40,422	1,330	27	46	7.3%
1985	1,549	50	39,449	1,274	25	49	6.5
1986	1,571	50	38,000	1,204	24	51	3.3
1987	1,544	48	35,591	1,104	23	54	5.5
1988	1,582	48	37,132	1,130	23	56	4.1
1989	1,685	50	46,199	1,379	27	56	-0.5
1990	1,940	57	69,565	2,038	36	57	1.7
1991	2,223	64	100,044	2,875	45	57	0.3
1992	2,523	71	134,844	3,796	53	59	3.5
1993	2,900	80	173,953	4,804	60	61	4.3
1994*	3,220	87	209,149	5,765	65	62	1.6

* Estimated.

SOURCE: Health Care Financing Administration, Office of the Actuary.

intermittent care (four or fewer days per week) to qualify for services. This policy expanded the number of services that met the guidelines and increased both the number of people receiving services and the number of services they could use. As a result, the number of beneficiaries having a home health visit went from 50 per 1,000 in 1989 to 87 per 1,000 in 1994. Visits per person served also surged, from 27 visits to 65 visits. More recent growth is due to a small proportion of heavy users: In 1992, 18 percent of all users had more than 100 visits and accounted for over 55 percent of the charges for this benefit.

Ambulatory Services—Payments for ambulatory services, whether furnished on an outpatient basis or by physicians, increased from 30 percent of total program spending in 1983 to 32 percent in 1994. (Outpatient care is provided in hospital outpatient departments, free-standing ambulatory surgical centers, independent clinical laboratories, comprehensive outpatient rehabilitation facilities, and free-standing dialysis centers.) Part B outpatient expenditures reached $14.1 billion (see Table 3-9). Nearly 75 percent of this spending ($10.6 billion) was for services provided in hospital outpatient departments.

Payments to independent facilities increased from 15 percent of Medicare's outpatient payments in 1983 to 25 percent in 1994 (see Figure 3-2). Some of this growth is due to more ESRD patients and greater use of free-standing ESRD facilities. For these services alone, payments rose from $423 million in 1983 (or 13 percent of all outpatient payments) to $2.1 billion (or 15 percent) in 1994. Even more dramatic is the increasing share of payments for rehabilitation services, rural health clinics, and federally qualified health centers, which grew from 2 percent of outpatient payments in 1983 to 10 percent in 1994.

Payments for physician services grew 11.6 percent between 1993 and 1994. This is a relatively large increase compared to the 3 percent and 6 percent annual growth seen during the two previous years. Despite this rise, physician payments remained at 64 percent of Part B payments and 23 percent of total payments, the same proportions as in 1993.

Medicare Managed Care

Beneficiaries who have Part B coverage can choose to enroll in a managed care plan. As of March 1995, 3.2 million (or 8.7 percent of all beneficiaries) had chosen this option. The majority (76 percent of these) were enrolled in risk-based contracting plans, which most resemble private sector HMOs. Medicare pays these plans a capitated rate to cover all Part A and Part B services. Another 17.7 percent of these enrollees were in health care prepayment plans (HCPPs), to which a capitated payment was made for certain Part B services. HMOs that are paid based on the cost of providing all Part A and Part B benefits, or cost-based

Table 3-9. Estimated Medicare Part B Program Payments, by Type of Service, 1983-1994

Year	Physician		Outpatient[a]		Other[b]	
	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change
1983	$14.2	—	$3.2	—	$0.7	—
1984	15.7	10.3%	3.7	15.6%	0.9	30.6%
1985	17.2	9.7	4.4	16.7	1.3	45.0
1986	19.6	13.6	5.2	20.2	1.8	39.7
1987	22.2	13.3	6.2	18.2	2.4	33.7
1988	24.5	10.6	7.0	13.4	3.1	26.5
1989	26.8	9.5	7.6	8.8	3.7	20.5
1990	29.5	10.0	8.6	11.9	4.5	20.2
1991	31.6	7.0	9.8	14.4	5.2	16.3
1992	32.5	3.0	11.1	13.6	6.0	14.8
1993	34.6	6.3	12.5	12.6	6.9	14.5
1994	38.6	11.6	14.1	12.9	8.0	16.0

Note: Payments reported here are incurred expenditures rather than outlays and do not include beneficiary copayments.

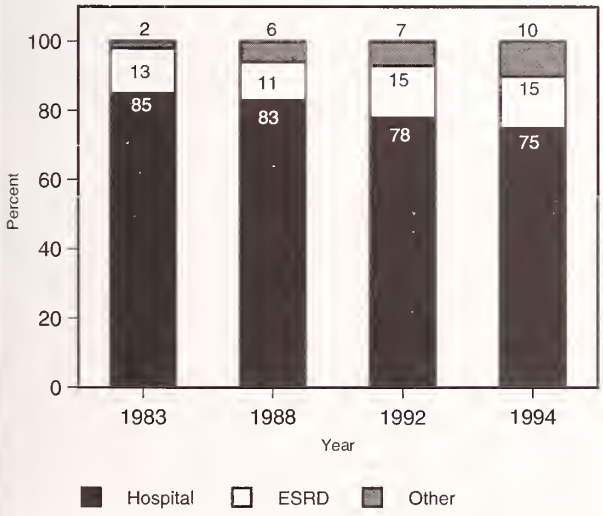
[a] Outpatient payments include payments for outpatient services provided by hospitals, free-standing end-stage renal disease facilities, skilled nursing facilities, comprehensive outpatient rehabilitation facilities, rural health clinics, and other providers of Medicare-covered outpatient services.

[b] Other Part B payments are payments to home health agencies, group prepayment plans, and independent laboratories.

SOURCE: Health Care Financing Administration, Office of the Actuary.

contracting plans, account for the rest of Medicare's managed care enrollees. Enrollment in all these plans has grown 11 percent annually since 1990 and increased by 16 percent between 1993 and 1994 alone, with most of this growth occurring in risk contracting plans (see Table 3-10). Medicare program payments for managed care enrollees totaled $10.6 billion in 1994, up 23 percent from 1993. About 86 percent of these payments went to risk contracting plans.

Figure 3-2. Medicare Outpatient Payments, by Site of Care (In Percent)



Note: ESRD = free-standing end-stage renal disease facility. Other = outpatient care provided in skilled nursing facilities, rehabilitation facilites, comprehensive outpatient rehabilitation facilities, rural health clinics, and federally qualified health centers.

SOURCE: Health Care Financing Administration, Office of the Actuary.

Payment Issues—Under a risk contract, Medicare pays an HMO a capitated amount for each beneficiary, adjusted to reflect age, sex, Medicaid status, institutionalization, and employer-based coverage. The base rate equals 95 percent of the average fee-for-service Medicare program payments (or adjusted average per capita costs, AAPCC) in a plan's service area. Plans are financially at risk for all covered services used by the beneficiary.

The calculation of the payment method has been criticized on several counts. Because the AAPCC is based on Medicare's total fee-for-service payments in a particular geographic area, it includes Medicare's payment adjustments for teaching and disproportionate share (DSH) hospitals. The plan, however, is not obliged to use these providers or pass along Medicare's payment adjustments to them. Thus, the appropriateness of including teaching and DSH payments in the calculation of the AAPCC has been questioned. Further, these calculations omit services provided by the Departments of Defense or Veterans Affairs and vary widely

Table 3-10. Medicare Managed Care Enrollment and Payments, 1990-1994

Year	Combined Contracts*				Risk Contracts			
	Enrollment		Payments		Enrollment		Payments	
	Number (In Millions)	Percent Change	Amount (In Billions)	Percent Change	Number (In Millions)	Percent Change	Amount (In Billions)	Percent Change
1990	1.9	—	$ 4.9	—	1.2	—	$4.2	—
1991	2.1	10.5%	5.9	18.7%	1.3	8.3%	4.9	16.7%
1992	2.3	9.5	6.9	17.7	1.5	15.4	5.7	16.3
1993	2.5	8.7	8.6	24.5	1.7	13.3	7.2	26.3
1994	2.9	16.0	10.6	23.1	2.1	23.5	9.1	26.4

Note: Data are as of September each year.

* The combined contracts include risk, social health maintenance organization, cost, and health care prepayment plans.

SOURCE: Health Care Financing Administration, Office of Managed Care.

among counties. Another concern is that Medicare's payment rates may be too generous in areas with high FFS payments, providing enrollees in those areas with more benefits than enrollees in lower AAPCC areas (see discussion below). Conversely, the rates may be too low in areas with low payments, limiting plan participation.

Medicare's requirement that a plan return any difference between its expected cost and payment to the program or to the beneficiary also raises some equity issues. Plans that want to participate in the risk contracting program submit an adjusted community rate (ACR) proposal to Medicare. This includes the plan's expected cost of providing Medicare-covered benefits, which is based on its costs for its commercial enrollees, adjusted for the higher usage rates of an older population. If a plan's expected cost for providing services is lower than its expected Medicare payments, the plan must return funds to Medicare or provide the beneficiary extra benefits through additional services or lower cost-sharing requirements. As a result, beneficiaries' benefit packages vary by plan.

All 144 plans participating in Medicare in 1994 offered some extra benefits either at no charge to offset the difference between their cost and the AAPCC or for an extra charge to the beneficiary to attract new enrollees. Most offered routine physical examinations (97 percent) or immunizations (90 percent). Twelve plans charged no copayment, and at least three did not have a premium payment. The value of these extra benefits varies across plans. Preliminary analysis of the ACR data shows that plans in areas with higher AAPCCs generally provide more benefits without extra charges than those in areas where the AAPCC is lower. This indicates that Medicare's payment rates are higher, relative to costs, in areas with higher FFS payments. Thus, beneficiaries in areas with high AAPCC rates get more benefits than those living in areas with lower rates. Further, beneficiaries in areas with low AAPCC payment rates have less inducement to enroll in managed care plans.

Utilization Issues—Medicare managed care enrollees use a different mix of services than those in the fee-for-service program. This may reflect differences in health status of the managed care population, or may be because the plans have greater flexibility in making service decisions than providers in the fee-for-service program. For example, a beneficiary enrolled in an HMO may go directly into a nursing facility without a prior hospital stay and still receive coverage. With a capitated payment, plans have an incentive to manage and direct service use to control costs and improve efficiency.

Beneficiaries in risk contracting HMOs were just as likely to use hospital, physician, and home health services as their fee-for-service counterparts, but they used fewer of them, according to the program's 1992 evaluation.[4] This was not true, however, for nursing home use. HMO enrollees were likelier to use a skilled nursing facility, although length of stay was similar to that of FFS beneficiaries. Apparently, plans were not limiting access to ambulatory and inpatient services, but were using skilled nursing facilities in place of some hospital days.

Medicare beneficiaries in risk contracting plans had fewer days of hospital inpatient care compared

with those in FFS arrangements (1,352 days per 1,000 enrollees versus 2,560 days per 1,000 enrollees).[5] Length of stay per admission for beneficiaries in the risk contracting plans was shorter, averaging 6.1 days per stay rather than 8.5 days per stay in the overall Medicare program. These lower utilization rates may reflect a healthier population in the HMOs, a theory supported by evidence from the program's evaluation.[6]

Managed Care Demonstrations in Medicare—Medicare also sponsors several managed care demonstrations that use HMOs to provide services to special populations. The social health maintenance organization (SHMO) demonstration is the largest of these projects. SHMOs are HMOs that pool a capitated payment from Medicare with other funding sources to provide acute and some long-term care services to Medicare beneficiaries. The four SHMOs are paid 100 percent of the AAPCC for their enrollees, rather than the 95 percent received by risk contracting plans. Further, they get higher payments for beneficiaries who are eligible for nursing home services, but who remain in the community. Two of the SHMOs were preexisting HMOs to which chronic care and case management packages were added, while the other two were former long-term care providers that had case management experience but no health plan component. In 1994, some 22,342 beneficiaries were enrolled in SHMOs.

After controlling for case-mix differences, SHMO enrollees generally received the same or fewer services than the fee-for-service comparison group.[7] Hospital expenditures were lower for SHMO enrollees than for their counterparts, especially for sicker, frailer people. Expenditures for skilled nursing care, on the other hand, were higher for most patients. Home health spending varied: Two SHMOs spent more than the FFS group, and two spent less. Physician expenses varied by whether the SHMO was a previously existing HMO, in which case expenditures were higher than for the fee-for-service group. Otherwise, enrollees in the SHMOs spent less on physician care than those in the fee-for-service program.

Medicare also sponsors the SELECT program, which is a preferred provider network option for supplemental insurance coverage operational in 15 states. Under this program, participating medigap insurers charge beneficiaries lower than average premiums for supplemental benefits if they use network providers. They can do this because, unlike fee-for-service providers, participating hospitals are allowed to discount Part A deductibles. This waiver permits the providers to charge less for inpatient services, and the savings are passed on to beneficiaries through lower premiums.

Only a limited number of medigap insurers in the 15 states participate in the SELECT program. Medicare's administrative requirements may help explain why some have opted not to participate. Unlike Federal medigap requirements, Medicare requires SELECT insurers to make certain that enrollees have sufficient access to services. They must also provide an ongoing quality assurance program, disclose information to beneficiaries about network and out-of-area use restrictions, and inform beneficiaries about the cost and availability of non-SELECT medigap options.

MEDICAID

The Medicaid program, financed jointly by the Federal and state governments, is administered by the states within parameters set by Federal law, regulations, and guidelines. Although states have some flexibility, they are required to cover certain core populations and benefits, including both acute and long-term care services. In 1993, Medicaid enrolled more than 38 million people for at least one month; over 33 million received health care services covered by the program. A number of distinctly different groups are eligible for Medicaid, although all must meet low-income criteria. Not all of the poor, however, are eligible.

Those who receive Supplemental Security Income, either because of age or disability, automatically qualify for complete Medicaid coverage. Some states may also cover persons who are impoverished by their medical bills, including those using nursing home care. For low-income elderly persons not otherwise qualified for Medicaid, states must cover Medicare premiums and cost-sharing requirements.

People under 65 may qualify for Medicaid under a number of different provisions of the Federal law. Children and their parents who receive Aid to Families with Dependent Children (AFDC) qualify

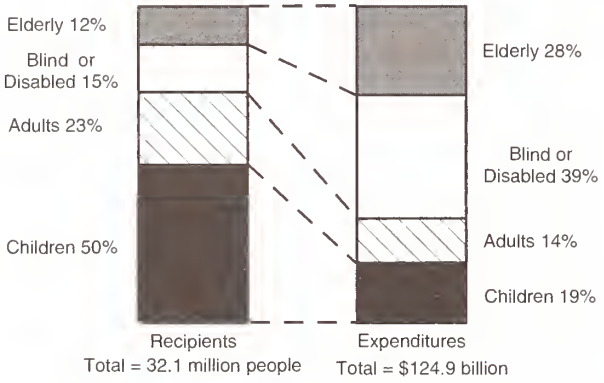
automatically for Medicaid, although the income standard for AFDC varies by state. Further, certain low-income children and pregnant women who are not eligible for AFDC are guaranteed Medicaid eligibility under Federal law. Other targeted groups of children and adults with dependents also have been singled out for coverage by Federal and state law.

Although more than two-thirds of those who receive Medicaid services are children and adults with dependent children, these groups account for only about one-fifth of all service payments because they use fewer (and less costly) services (see Figure 3-3). The elderly, blind, and disabled group accounts for the largest share of total spending for all services. Those who use long-term care or services for the mentally retarded account for a particularly high share of expenditures.

Expenditure Growth

From 1990 to 1992, Medicaid expenditures for medical care rose rapidly, from $69 million in 1990 to $112.5 million in 1992.[8] Increasing disproportionate share hospital payments were an important contributor to the extraordinary growth in Medicaid expenditures (see Table 3-11). These payments subsequently were limited by Federal law, and overall Medicaid spending growth dropped dramatically from 1992 to 1993, to $12.4 billion, or 11 percent. Increases in the numbers of disabled people (such as those with AIDS) and those eligible for Medicare contributed to the rise in Medicaid expenditures from 1992 to 1993.

Figure 3-3. Medicaid Recipients and Expenditures, by Enrollment Group, 1993 (In Percent)



Note: The "adults" and "children" categories include only those who are not disabled. Data exclude Arizona and U.S. Territories, accounting adjustments, and administrative costs.

SOURCE: Urban Institute analysis of data from the Health Care Financing Administration.

Most states have tried to control higher spending by instituting prospective payment systems for providers, such as case-based reimbursement to hospitals and physician fee schedules. States are restricted in lowering payment rates, however, by the Boren amendment, a provision in the Medicaid law that requires states to make "reasonable and adequate" payment to providers.[9] Many states also limit the growth in the supply of all nursing home beds through certificate of need programs. Restricted nursing home bed supply constrains state Medicaid program spending because nursing home care accounts for about 20 percent of total program outlays. Another expenditure control strategy is to cover home-based services for Medicaid eligibles as a substitute for more expensive institutional care.

Medicaid Managed Care

Faced with both rising costs and a growing number of people eligible for Medicaid, states are designing managed care programs to limit the growth in Medicaid spending. In 1994, 44 states and the District of Columbia had such programs. Although nearly a quarter of Medicaid eligibles were in some form of managed care plan in 1994, less than 7 percent of Medicaid program expenditures are capitated risk payments.[10] States' ability to control their total expenditures through managed care will be limited unless these programs can be adapted and expanded to include both those who use the most services (the aged and disabled) and the most expensive services (long-term care).

Two basic models of Medicaid managed care are risk capitation and primary care case management (PCCM). Risk capitation is the model most similar to HMO products offered in the private sector, and the one with the largest share of Medicaid managed care program enrollees. Under this option, Medicaid eligibles receive covered services from an HMO or provider network for a monthly fixed payment rate per person. Certain services, like long-term care, chronic mental health care, and family planning, may be excluded from the rates. In the PCCM model, the state Medicaid agency pays practitioners to manage and coordinate the care of

Table 3-11. Annual Medicaid Expenditure Growth, by Growth Factor, 1990-1993

Growth Factor	1990-1991 Amount (In Billions)	1990-1991 Percent	1991-1992 Amount (In Billions)	1991-1992 Percent	1992-1993 Amount (In Billions)	1992-1993 Percent
Total	$18.4	100.0%	$25.1	100.0%	$12.4	100.0%
Beneficiary growth	7.1	38.5	8.5	33.8	8.4	67.6
Medical price inflation	3.5	18.8	3.9	15.4	3.3	26.7
Utilization and reimbursement	3.3	17.9	-1.0	-3.8	-0.4	-3.4
Payments to Medicare	0.6	3.1	0.3	1.3	0.5	3.8
Payments to HMOs	0.3	1.6	0.7	2.6	1.4	11.1
Disproportionate share payments	3.7	20.2	12.7	50.7	-0.7	-6.0

Note: Does not include Arizona, U.S. Territories, accounting adjustments, or administrative costs. Numbers may not sum due to rounding. HMO = health maintenance organization.

SOURCE: John Holahan, David Liska, and Karen Obermaier, *Medicaid Expenditures and Beneficiary Trends, 1988-1993* (Washington, DC: Urban Institute, 1994).

assigned Medicaid eligibles. Then, all services must be authorized by the practitioner. Approved services are paid on a fee-for-service basis.

States have implemented their managed care programs in a variety of ways, as demonstrated by a recent survey.[11] The survey found that the number of Medicaid eligibles enrolled in these programs varies from all to very few. States are using combinations of managed care models and creating new ones. Some programs are statewide, while others are limited to a city; some are voluntary, while others are mandatory.

Despite these differences, the programs share certain features. States tend to leave out the most expensive populations and services. Most states have opted to exclude the disabled and those 65 and over from mandatory enrollment in risk capitation plans. When these populations are included, however, some of their costliest benefits, such as mental health services or long-term care, usually are excluded from the capitation arrangement.

States also tend to pay risk contracting plans using the same basic methodology. Limitations on health plan risk, such as stop-loss limits on catastrophic care and reinsurance, are included in fewer than half of capitated risk contracting programs, even for costlier populations. States typically calculate capitated payments to plans on the basis of enrollees' historic costs under fee-for-service payment with adjustments for geographic areas; many states use age and sex to adjust the capitation rates.

PRIVATE SECTOR COVERAGE

In addition to the people in publicly sponsored insurance programs, almost 70 percent of the population under 65 had private health insurance coverage in 1994.[12] The majority (87 percent) were insured through their own, their spouse's, or their parent's employer, while the rest (13 percent) had individual insurance policies. (See Chapter 1.)

Insurance Offered by Employers

The availability of employer-based health insurance differs by firm size. Small firms are less likely to offer health insurance coverage, although 51 percent of those having up to 50 workers offered coverage in 1993.[13] Nearly 80 percent of workers in larger firms (those having at least 200 employees) had insurance in 1994. About 46 percent of all employers with more than 10 employees offered traditional indemnity insurance in 1994 and 30 percent offered PPO options, while only 22 percent offered HMO options (see Table 3-12).[14]

Total insurance costs, which include both employer and employee shares, are lower on average for managed care enrollees than for those in indemnity plans. In 1994, the average total cost for an employee in an HMO was $3,485. For the average employee in a PPO it was $3,386. These figures compare to an average cost of $3,850 in an indemnity plan. Relatively lower costs in managed care plans may reflect lower health care utilization due to healthier enrollees or lower provider payments. In addition, HMOs may achieve savings

Table 3-12. Firms Offering Various Insurance Options, by Size, 1994 (In Percent)

Firm Size	Indemnity	PPO	POS	HMO
All firms	46%	30%	15%	22%
Employees				
10-499	46	30	15	22
500+	60	40	25	53

Note: More than 90 percent of the sampled firms had fewer than 500 employees. This proportion reflects national employment distributions. PPO = preferred provider organization. POS = point of service. HMO = health maintenance organization.

SOURCE: A. Foster Higgins & Co., Inc., *National Survey of Employer-Sponsored Health Plans, 1994.*

through managing service use, while some of the lower PPO costs may be attributable to more limited service coverage.

Costs for employee health benefits actually decreased by 1.1 percent between 1993 and 1994, from $3,781 to $3,741 per person.[15] Several factors may be responsible for this. Among these are external considerations, such as relatively low medical cost inflation during the period. As employees and retirees shift into lower-cost managed care options, the average cost per employee has declined. In addition, extensive benefit redesign also has led to the exclusion of more expensive benefits, like prescription drug coverage, from employer-based packages.

Employers' Cost Controls

Employers have used many methods to control their insurance costs. One of the most significant is self-insuring. Self-insured employers bear the financial risk of insuring their employees and pay a third party, such as a commercial insurance company or a managed care plan, for claims processing or contract administration. Self-insured employers may purchase stop-loss insurance to protect themselves against extremely large claims.

Self-insuring allows employers to reduce their costs in several ways. One is that it enables them to retain control over the funds needed to pay claims until services are used. In addition, self-insured companies do not have to pay the additional costs that insurance companies charge to cover state insurance taxes. Nor do they have to provide a minimum benefit package, which might be specified through state insurance regulations. About 19 percent of all firms with at least 10 employees are self-insured. However, the majority of such businesses have more than 100 employees, and thus represent a substantial share of insured workers.[16]

Some employers have joined purchasing cooperatives to control their costs. These groups organize smaller firms into relatively large market shares, giving these businesses the financial clout necessary to negotiate discount rates with plans. As a result, many have succeeded in lowering their premiums and average cost per employee. The California Public Employees Retirement System (CalPERS), for example, has organized almost 800 public employers, three-quarters of which have fewer than 100 employees, into a single purchasing group that negotiates rates. In 1995, CalPERS negotiated a 1.1 percent reduction in premiums across all plans. [17]

Other purchasing groups have been formed by private employers nationwide, including firms in Cleveland, central Florida, San Francisco, and Memphis. These coalitions have used group purchasing power to negotiate rates aggressively and collect information on provider performance. The performance data are used to compare providers and negotiate future contracts. The purchasing groups contract with a variety of plans and providers, including HMOs, PPOs, and fee-for-service plans, and each is reporting some type of savings. The Central Florida Health Care Coalition, for instance, experienced a 2 percent decrease in costs per hospital admission between 1992 and 1994; the Memphis Business Group on Health saw a 6 percent cost increase during the past five years compared with the national average of 14 percent.

USE OF MANAGED CARE

Purchasers, both public and private, are incorporating managed care techniques and contracting with managed care plans to control their costs. The design of these options varies extensively according to payer and location. While the public programs have certain commonalities across states, they vary in the extent to which they manage care, cover benefits, and pay plans. Variation in private sector markets is widest of all. Markets may be defined within one city or among groups of

employers in one city. Employers and plans are constant sources of innovation, and distinctions between types of health plans are blurring. Purchasers are looking for tools to reduce their costs, targeting expensive services and inappropriate care in general.

Differences Between Public and Private Programs

A number of private sector payers have successfully reduced the growth of their health care expenses, as noted above. Some of these reductions may be the result of prudent purchasing achieved by aggressively negotiating rates with providers. Where the public sector has imposed price constraints, it too has been able to constrain expenditure growth. These reductions may also be explained by increased managed care enrollments, which have lowered premiums, out-of-pocket costs, and rates of spending growth. In addition, both Medicare and Medicaid have reduced the use of hospital care (the most expensive service) under their respective managed care programs.

Whether the public sector can achieve the same level of savings as the private sector remains to be seen, however. Public and private payers face different constraints in their ability to use price and volume controls. For instance, many employers can negotiate benefit design since they are not required to offer specific health benefits. Further, unlike the current Medicare program where payments are set through a national formula, private sector purchasers have the authority to negotiate prices.

Marketing and administrative costs also may be lower for managed care plans serving private sector firms. Because private sector coverage is largely employment-based, insurers can market to an employer instead of having to identify and enroll individual beneficiaries. As more employers offer managed care options to retirees, these marketing costs will be reduced. Administrative costs also may be lower in the private sector, where disenrollment is limited to annual periods. Medicare beneficiaries, on the other hand, are allowed to move from one plan to another or leave the managed care program altogether on a monthly basis. Medicaid's policy is similar to Medicare's but allows less frequent disenrollments.

Another difference between public and private payers concerns information dissemination practices. Many private sector employers and group purchasers collect and use information that allows them to compare competing plans' prices, products, and enrollees' satisfaction levels. The public sector's use of such tools to establish provider contracts has been quite limited.

These factors appear to have constrained the number of managed care plans participating in public programs, compared with the number found in the private sector. In 1993, of more than 300 HMOs, 66 had Medicare risk contracts, 65 had Medicare cost contracts, and 85 had contracts with Medicaid managed care programs.[18] Participation appears to vary by health plan characteristic. Participating plans tend to be larger, with Medicare plans having a median enrollment of 95,000 and Medicaid plans 73,000. By contrast, plans that limit their enrollees to private payers have a median size of 25,000. Larger enrollments allow plans to spread the risk of these generally sicker populations across more enrollees. HMOs whose provider networks are made up of independent practitioners are less likely to participate in Medicare and Medicaid than are staff or group model HMOs. For-profit HMOs and HMOs owned by commercial insurance companies have relatively low levels of Medicare and Medicaid participation. However, plans are increasingly turning to the public sector programs for enrollees.

The Tools of Managed Care

Health plans employ a number of strategies to reduce health care spending and utilization. Among these are benefit design, provider selection and payment, and utilization management. Benefit design can give enrollees incentives to use less costly services. Through its provider contracts, a health plan selects its providers and establishes incentives through the payment mechanisms to furnish less expensive care. Utilization management comprises a group of health plan activities designed to reduce further service use and spending.

Some of these strategies are not unique to managed care plans. Indemnity plans, which 10 years ago paid provider charges without assessing whether the charges were too high or the services were appropriate, have incorporated benefit design and utilization management techniques to limit the

premiums they charge to employers. Health plans that include provider networks (HMOs and PPOs) have additional opportunities to constrain spending increases through contractual agreements, thus influencing prices, incentives, and practice patterns. From one plan to another, the stringency of utilization control strategies varies in response to market forces, including price competition, payer pressure to hold down premium growth, and the acceptability of managed care techniques to health plan members and providers.

Benefit Design—The benefits a plan covers influence both the direct costs of providing services and the characteristics of enrollees who choose a particular plan. All HMOs cover primary care visits and preventive services like childhood immunizations.[19] Coverage for outpatient mental health services is another matter; it illustrates how benefit design can be applied to discourage use of costly services. Because mental health is among the most expensive and open-ended benefits, utilization is managed more tightly in many HMOs, PPOs, and indemnity plans. Nationwide, 91 percent of all HMO members are limited to a maximum number (usually 20) of covered mental health visits per year.

Health plans also can encourage or discourage use of covered services through cost sharing. In HMOs, there are minimal or no copayments for primary care and preventive services; enrollees using mental health visits, by contrast, face average copayments of $18 per visit.[20] To compete with PPOs and indemnity plans, many HMOs are offering a point-of-service plan, which allows enrollees to obtain certain services outside the HMO network without a referral. To encourage the use of network providers—and control costs—HMOs place a higher financial burden on members seeking care outside the system. Members therefore have a financial incentive to stay within it.

Low cost sharing and a broad array of covered benefits attract enrollees to a health plan. Further, certain benefits, such as nutrition counseling, may entice enrollees who are concerned about healthier lifestyles.

HMO and PPO Provider Selection—In general, provider selection strategy must balance prices with acceptability to purchasers, enrollees, and other providers already in the plan. HMOs and PPOs consider both the amount that providers charge and the level and appropriateness of the services they furnish. Plans can negotiate a lower price by limiting the number of providers in their network. They must also consider, however, their members' preferences for accessible, reputable providers. To gauge quality, plans use information on providers' credentials, accreditation, and reputation.

The hospitals included in a network affect its appeal to purchasers, enrollees, and physicians. In 1992, HMOs reported that quality of care, geographic coverage, and scope of services were the most important criteria for hospital selection (see Table 3-13). The reputation of a hospital among physicians has been found to be an important factor influencing which hospitals an HMO selects and may be considered an indicator of hospital quality.[21] Plans also consider price. Because inpatient hospital costs represent a significant proportion of total health care costs, a plan's ability to negotiate inpatient rates and to manage hospital utilization has a substantial impact on its financial performance.

Plans assess other providers in a variety of ways. To review physicians' credentials, for example, plans verify physician licenses, consult the National Practitioner Data Bank for a history of malpractice, and conduct site visits and audits of medical records in their offices. Plans usually require physicians to have or obtain admitting privileges at hospitals with which they contract.[22]

Plans appear to be contracting with nursing facilities and bringing home health services

Table 3-13. HMO Hospital Selection Criteria, 1992 (In Percent)

Selection Criteria	Importance Level		
	Very	Somewhat	Not
Quality of care	94.6%	4.9%	0.6%
Geographic coverage	92.3	6.6	1.1
Scope of services	82.2	16.7	1.1
Physician affiliates	70.9	28.0	1.2
Willingness to offer per diem	35.8	55.2	9.0
Employer recommendations	31.5	58.0	10.5
Willingness to offer capitation	8.8	34.9	56.3

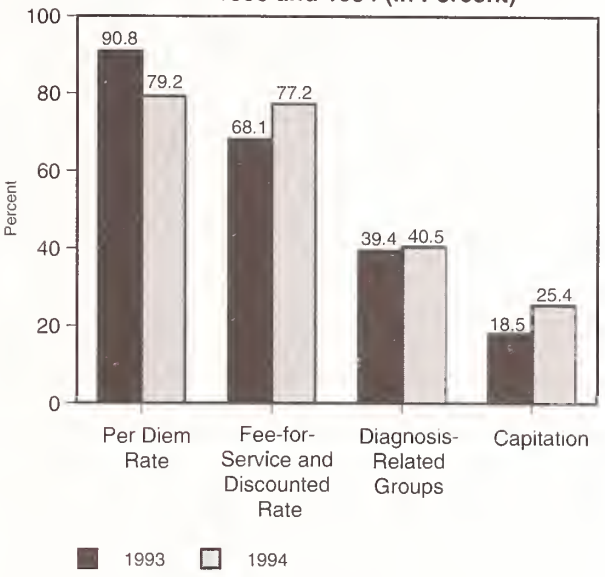
Note: HMO = health maintenance organization.

SOURCE: Group Health Association of America, *HMO Industry Profile*, 1993.

in-house to provide post-acute care. For nursing facilities, plans consider the quality and the mix of services provided. The selection of a specific facility may be based on the utilization review and discharge planning staff's perception of the facility's quality.[23] HMOs generally choose skilled nursing facilities with a rehabilitation (rather than a long-term care) focus so that the needs of their acutely ill patients can be met. HMOs increasingly are providing home health services in-house because of the rapid growth and consistently high volume of these services used by HMO members, especially Medicare and Medicaid enrollees.[24]

HMO and PPO Provider Payment—Some survey data on HMOs' payment methods for inpatient hospital care and physicians are available. The only survey information on PPO payment methods, however, is for physician services. The lack of information on PPOs is most likely because of the changing marketplace and difference in PPO definitions across states.

Figure 3-4. HMO Hospital Payment Methods, 1993 and 1994 (In Percent)



Note: Health maintenance organizations may use more than one method. HMO = health maintenance organization.

SOURCE: InterStudy, *The InterStudy Competitive Edge; Part II: Industry Report 5.1* (Minneapolis, MN: InterStudy, 1995).

There are several basic methods of payment: fee for service, per diem, case, and capitation. These methods vary not only by plan but by provider, geographic market area, and payer. Even within one city, a single plan may negotiate different arrangements with the same type of provider, and several methods may be combined for the same provider. Each of the payment methods involves some financial risk for providers. As the level of risk increases, so does the opportunity to make money (the "upside risk") or lose money (the "downside risk"). Each payment methodology thus creates different incentives for providers and health plans.

Hospital Inpatient Services—The per diem payment method is the most common approach for paying hospitals for inpatient care (see Figure 3-4).[25] Under this arrangement, the hospital and the HMO negotiate a fixed daily payment rate. Separate rates may be negotiated for different types of hospital services, such as medical/surgical, obstetrics, or intensive care. Since the per diem payment is based on aggregate average resource use, the hospital bears a downside risk for patients with above-average daily costs, so the facility's incentive is to reduce costs. Hospitals also risk losses on cases when the average length of stay is shorter than that used in the per diem calculation.[26] Hospitals have an incentive to keep patients longer because resource costs generally are lower for each successive day spent in the institution. Managed care plans, on the other hand, save money if they can limit the total number of admissions and shorten the length of stay. Negotiation of a separate per diem for different types of services and higher per diem amounts for the first day of a stay can mitigate against the downside risk for the hospital and minimize the incentive to prolong the stay.[27]

Discounted or full charge payments also are common arrangements between plans and hospitals. If charges are high enough to cover costs, the hospital bears no risk for the incidence or intensity of services used by the health plan member. Under these payment methods, health plans have an incentive to minimize their costs by contracting with low-charge hospitals or negotiating low prices and reducing utilization of the most expensive services.

The third most common type of inpatient hospital reimbursement arrangement is based on Medicare's prospective payment system using diagnosis-related groups. Under this method, the HMO

retains the risk that the member will need services; however, the hospital assumes the risk associated with the cost of the entire hospital stay. This means that the hospital will reap all of the financial rewards of lowering the cost of patient care, for example, by decreasing the length of stay and reducing ancillary service use.[28] HMOs continue to have an incentive to minimize the number of hospital admissions as well as to reserve inpatient use for the sickest patients.

Under capitation arrangements, the HMO pays the hospital a fixed monthly amount per member for inpatient care, which may be adjusted to reflect characteristics of the enrolled population. Some HMOs also give hospitals a capitated payment for skilled nursing, home health, emergency room, or other outpatient services.[29] The capitation amount does not vary by the volume or intensity of services. A similar method is called "percentage of premium payments." Under this method, the hospital receives a fixed percentage of premiums collected for the defined population. Payments thus change as premium amounts received by the plan increase or decrease. An HMO that owns a hospital may establish a hospital budget for inpatient care.

Under capitation, percentage of premium payment, or budget methods, hospitals are at risk for both the cost and use of services. Stop-loss provisions or reinsurance can limit a hospital's financial risk. Under such an arrangement, for example, a hospital's losses are limited to a fixed dollar amount over a specific period. The loss may be tied to individual cases or to the entire group of enrollees using hospital care. After the hospital loses the fixed amount, the plan may reimburse it for all additional costs, or could cover part of the costs.

Hospitals may be less willing than physicians to accept the risk associated with capitated payment arrangements because they have less control over which patients are referred to the hospital. Capitation arrangements with hospitals may be more common if the hospital is either financially or organizationally linked to referring physicians and other providers. Facility capitation arrangements that include post-acute or subacute care give institutions an incentive to substitute less costly sites for hospital inpatient care. The ability of hospitals to do this, however, is circumscribed by their arrangements with and control over these other providers.

Hospital Outpatient Services—Two common hospital outpatient payment methods are discounted charges and bundled charges.[30] Under discounted charge arrangements, the hospital and the HMO negotiate an across-the-board discount from charges. The discount may be tied to the number of patients the HMO sends to the hospital. Because total charges for outpatient surgical procedures and associated ancillary services may be greater than for an inpatient stay for the same condition, discounted charges for outpatient care may be capped at a percentage of the negotiated per diem for inpatient care. Under bundled charge payment methods, a single rate is established for a group of procedures that usually are provided at the same time. Less common is a per-case payment based on Medicare's fee schedule for ambulatory surgical centers.

Physicians—HMOs and PPOs use three different approaches to paying physicians: fee for service, capitation, and salary. Specialists are likelier than primary care physicians to receive fee-for-service payments. Within these basic approaches, arrangements may include other compensation related to performance. Some plans withhold portions of payment until utilization is reduced to a specified level. Others pay bonuses to providers if utilization is lowered. Some plans use both bonuses and withholds; others use neither. PPOs are more likely than HMOs to pay physicians on a fee-for-service basis with no withholds or bonuses.[31]

Utilization Management—HMOs and PPOs employ various techniques to monitor and reduce utilization of certain services and lower overall costs. Some are targeted at physician practice patterns; others focus more specifically on reducing institutional use. Indemnity plans and providers that are at risk for service use under contractual arrangements also have adopted some of these techniques. Indemnity plans are less able to use approaches designed to change physician behavior, however, since they have only very limited financial or organizational relationships with physicians.

Referral Management—In traditional HMOs, enrollees cannot see a specialist or obtain specialty services without a referral from their primary care

physician. Exceptions may be made for certain services that the plan wants its members to obtain; for example, a patient independently may be allowed to schedule a visit to a gynecologist for a pap smear. By restricting referrals in this way, the plan can anticipate expenditures and hold the primary care physician accountable for ensuring delivery of appropriate services. While PPOs generally do not impose these restrictions on enrollees, they structure cost sharing to encourage enrollees to obtain referrals from a designated physician and to use network providers.

Provider Practice Patterns—Professional medical organizations, the Agency for Health Care Policy and Research (AHCPR), plan medical staff, and other entities are developing guidelines for the medical management of specific health care conditions. Managed care plans use these guidelines to educate providers about more efficient or higher-quality approaches to the delivery of care. Plans also use guidelines to monitor physician performance and meet with physicians to review the results. Most HMOs use practice guidelines; most PPOs do not.[32] Plans also use the data they collect on physician practice patterns to compare physicians, a practice called "profiling." They may, for instance, look at prescribing patterns for prescription drugs, hospital emergency rooms, and medical specialists. They also may review patient satisfaction, appointment waiting times, and outcomes. These profiles often are used to identify physicians whose practice patterns vary significantly from others. Profiling can be employed to gather information on quality or cost problems for internal management, educate physicians about their performance relative to others, determine contract renewals, and provide information to patients and payers.

Case Management for High-Cost Cases—Case management of patients with chronic health care needs is another utilization management technique. The scope and design of case management programs vary widely by plan, but there are two basic models.[33] High intensity programs focus on managing service use across all health care settings, so case managers spend significant amounts of time with the patient. Low intensity programs focus only on inpatient hospital use and authorization of services. A core set of activities under either model includes selecting patients for case management, developing and implementing a plan for the services the patient will receive, and monitoring care over time. Patients generally are selected for case management on the basis of their diagnosis and are identified through referrals from providers.

Service and Coverage Authorization—Health plans use three general methods to authorize services—precertification, concurrent review, and retrospective review. Plans may require physicians and hospitals to notify their review staff before scheduling any inpatient care or outpatient procedures. Precertification allows the plan to determine the most appropriate setting for the care, to make arrangements for preadmission testing in the most efficient setting, and to alert the health plan's staff to monitor a case. Preadmission notification also allows the plan to anticipate a claim. Under concurrent review, managed care plans monitor and limit the length of a hospital inpatient or nursing home stay, once the patient has been admitted. Plan review staff members are assigned to track stays and visit their member patients to assess the care being provided and help with discharge planning. Staff generally use pre-set criteria to judge appropriateness of care and set limits on hospital payment, including diagnosis-specific lengths of stay.[34] Finally, plans retrospectively review claims for accuracy and to profile patterns of care furnished by institutions.

QUALITY

All payers are engaged in efforts to limit costs, either through reorganizing the way services are delivered, reducing prices paid to providers, or both. These cost-containment efforts raise questions about whether the incentives providers face will negatively affect quality of health care and access to services. Some researchers argue that because both inefficient use and overuse of resources are pervasive, costs can be reduced without compromising health outcomes. Targeting these reductions, however, remains a concern. Further, the need to compare providers and health plans on costs and quality has led to an increased demand for monitoring health processes and outcomes by employers, public payers, and consumers.

Variation in Health Care Delivery

Evidence of wide variation in the use of services and the resources devoted to care for a given

condition may indicate inappropriate care, defined as underuse or overuse. To the extent that providers constrain use of services that do not improve patient outcomes or are furnished inefficiently, quality of care can be maintained or even improved. On the other hand, when variation indicates underuse of some services, quality could improve if certain populations received more of these services, although higher total costs could result.

The ability to identify inappropriate or inefficient service use, however, is severely limited. Most diagnostic and therapeutic interventions have not been subject to the type of rigorous evaluations of long-term outcomes that would allow targeted elimination or expansion of use. Evidence on the extent of variation in use and its relation to health outcomes can help to characterize the potential trade-offs between controlling expenditures and maintaining quality of care. This information, however, does not provide clear answers about how cost containment affects outcomes.

Much of the unexplained variation in patient care may be due to differences in physician practice patterns. Some amount of variation is inevitable and, in fact, may be appropriate. However, variation due to uncertainty or lack of information among physicians on how to manage medical problems may be inappropriate and undesirable. Many aspects of medical care—clinical diagnosis, decisions about treatment options, and predicting and measuring patient outcomes—are subject to uncertainty, which can lead to differing conclusions regarding appropriate patient care. The lack of consensus among physicians on the need for and appropriateness of treatment options compounds uncertainty further, which may lead to variation in practice patterns.[35]

One reason for variation in patient care is that medical diseases may manifest differently depending on the individual and the stage of disease progression. Therefore, clinical testing plays a vital role in reducing the diagnostic uncertainty that may be associated with physical examination alone. However, the continuous development of new tests and procedures, along with few restrictions on their use, has led to more testing than may be necessary for making diagnoses. The desire to reduce uncertainty has led to duplicative testing that adds little or no diagnostic data, routine screening for abnormalities that does not necessarily lead to changes in the course of clinical management, overuse of tests that carry a substantial risk, or performing additional tests that may even be harmful to an already ill or unstable patient.[36]

Variation is compounded by the wealth of therapeutic options available for a given condition.[37] Medical advances and the introduction of new technologies have expanded the number of alternative treatments for some conditions and have afforded treatment for previously untreatable conditions.

Randomized clinical trials of new and existing technologies are rare, and generally any evaluations conducted are based on narrowly defined patient groups which do not represent the wider population that ultimately receives the services.[38] Given the shortage of rigorous clinical evaluations, it is difficult for individual practitioners to assess the effects of medical interventions on quality of care over time. As a result, physicians may tend to follow the practices that are considered to be standard and accepted by their local medical communities.[39] Although some variation may be reduced by consensus within the medical community, it may or may not be based on conclusive empirical research.

The available information documents unexplained variations in medical care and uncertainty regarding the value of many services. The literature does not indicate whether spending growth can be curtailed without an adverse effect or whether cost containment will lead to inevitable declines in quality of care.

Private Sector Quality Measurement Initiatives

The area of quality measurement is still in its infancy. Much remains to be learned about the implications of variations in practice patterns and the effect of medical interventions on patient outcomes, whether measured as mortality, morbidity, or functional status. Nevertheless, many payers are looking for quality indicators to help them make health care purchasing decisions. Private sector and public organizations alike are responding to the need by producing sets of measures to help payers—and in some cases consumers—compare health plans and providers. Given the lack of

rigorous scientific research, these organizations usually define measures of appropriate medical care for which there is consensus. However, there are many barriers to the development, implementation, and use of measures that are reliable, meaningful, and comparable across plans and providers.

As employers have become more prudent purchasers of health care coverage for their employees, they increasingly require health plans and providers to supply information about the quality of care they furnish, including accreditation status; process information, such as childhood immunization rates; and outcomes measures, such as consumer satisfaction or mortality rates. In some areas of the country, coalitions of employers require health plans to provide information for "checkbooks" that rate local health plans across a number of quality and cost features.

Such requirements have encouraged plans to develop a standardized set of information on quality. A single set of measures allows employers to compare quality across plans and relieves the plans of some of the burden of customized reporting for each employer. The National Committee for Quality Assurance (NCQA) has spearheaded the development of a uniform set of quality, utilization, and financial information about HMOs, called the Health Plan Employer Data and Information Set (HEDIS). Other organizations have embarked on similar uniform health plan data reporting initiatives, in some cases borrowing measures from HEDIS.[40]

Although a number of health plans have reported HEDIS measures, external audit of data collection across HMOs found wide variation in the organization, availability, and quality of information in health plan administrative data sets.[41] Further, additional measures are needed to capture information on the quality of chronic care, mental health care and substance abuse, and access to care. Methods of accounting for the characteristics of the populations served must be developed further before these measures can accurately reflect health care quality. Quality and access indicators are sensitive to the socioeconomic and demographic characteristics of a health plan's enrollees, and thus may capture underlying differences in the populations served by the plan as well as the plan's quality of care.

The private sector also has been active in producing external quality monitoring programs for institutions. One such effort is being carried out by the Joint Commission on Accreditation of Healthcare Organizations, which is developing measures of hospital health care processes and outcomes for public dissemination. Others, launched by state and local hospital associations in Maryland, South Carolina, and Cleveland, are hospital performance reporting initiatives. Some of these activities are designed to help hospitals compare themselves with one another; others release information to employers and consumers. Hospitals and hospital networks independently are releasing performance profiles, consumer satisfaction data, and report cards.

Public Sector Quality Measurement Initiatives

Since 1993, the Medicare program has launched a number of quality initiatives. The most visible is the change in the Peer Review Organization (PRO) program. Under contract with Medicare, these organizations formerly were charged with reviewing a sample of medical records to determine whether services were necessary, reasonable, and appropriate. This activity has been replaced largely by studies and beneficiary and provider educational projects at the state and local level that are related to specific health care conditions and hospital management issues. Illustrative of these projects is an effort by several PROs to use AHCPR practice guidelines to educate patients and providers about alternatives to prostate surgery. Other hospital and physician-based projects include management of blood and blood products and administration of thrombolytic agents in patients admitted for heart attacks. In addition, the PROs and Medicare are engaged in a national initiative to monitor and report on selected process indicators of cardiac patient care in the hospital.

Medicare is in the early stages of defining health plan quality measures to use for external performance review of its risk contracting HMOs. The first phase of the project, now completed, was to identify measures appropriate for the Medicare population, explore data collection issues, and propose new roles for PROs in monitoring the performance of risk contracting HMOs.[42] Several measures will be tested in 1996. A group of plans, the Health

Care Financing Administration (HCFA), and NCQA are in the early stages of adapting HEDIS to Medicare and to Medicaid, since the existing HEDIS measures are considered inadequate for evaluating the care provided to Medicare or Medicaid patients in managed care plans.

Additionally, state Medicaid managed care programs are conducting focused studies on selected health issues relevant to the Medicaid managed care population, such as childhood immunizations and prenatal care, as part of an initiative sponsored by HCFA and the states. Medicaid poses the special problem of short enrollment periods. Some Medicaid managed care enrollees remain in a plan only a few months, giving the plan little opportunity to meet preventive care goals and influence behavior.

One early finding from those private and public sector quality initiatives is that data collection for quality reporting requires significant resources from providers and plans. Because each initiative entails a substantial commitment, providers and plans want to avoid multiple and redundant measurement activities. Information collection is hampered by variation in data quality and organization. Another concern is that plan and provider performance may be clouded by the characteristics of the patient population, and thus may not reflect providers' and plans' quality of care so much as the health of their patients. Finally, some researchers have a more basic concern that too little is known about whether the processes of care being evaluated make a difference in health outcomes.

ACCESS

Insurance coverage is one of the most important determinants of access to care. Access can be measured by the volume of services patients receive, by the percentage of people with a regular source of care, or by individuals' perceptions about whether they can get care when they need it. This section provides information on people who are and are not covered by employment-based insurance and differences in the number of services used by the nonelderly population, depending on insurance status. It also discusses differences in service use among aged Medicare beneficiaries and how this varies by whether they have supplemental insurance coverage. Finally, the section raises concerns about access to care for vulnerable populations in managed care plans, describing how some state Medicaid programs have structured arrangements with these plans to monitor and help ensure access.

Nonelderly Insurance Status and Service Use

Lack of health insurance may be the biggest barrier to receiving appropriate care in this country. Some 41 million people in the United States had no health insurance coverage at some point in time during 1993.

For the nonelderly population, insurance status is related to family income and employment. One-third of nonelderly persons in families with less than $20,000 annual income were uninsured in 1994. By contrast, only 8 percent of those in families with annual income of at least $40,000 were uninsured. Nevertheless, 20 percent of all the uninsured were in families whose incomes exceeded $40,000; half were in families earning at least $20,000.

Although most insured nonelderly people obtain health insurance through employment, many workers and their dependents are uninsured. In 1994, more than half of the uninsured (23 million) were in families headed by someone who worked full time for the full year. There were 6 million uninsured persons in families in which the head of the household did not work. The remaining 12 million uninsured were in families in which the head worked part time or for part of the year.

Three-quarters of uninsured nonelderly adults were employed in 1994. About 29 percent of self-employed persons and those in firms with fewer than 25 employees were uninsured. By contrast, 12 percent of workers in businesses with at least 500 employees, most of whom worked part time, were uninsured. Nearly all large employers offered health insurance to full-time workers, but 40 percent did not provide health insurance coverage to any part-timers.[43]

Studies have found that persons without health insurance use fewer health services than those who are insured (see Table 3-14). Uninsured people are less likely to use preventive services and have fewer physician visits and hospitalizations, despite

Table 3-14. Estimated Ambulatory and Hospital Inpatient Use Per Person, by Insurance and Health Status

Health Status	Ambulatory Contacts			Hospital Days		
	Uninsured	Insured	Relative Use*	Uninsured	Insured	Relative Use*
Adults						
All	2.7	4.4	61%	0.43	0.64	67%
Fair or poor	4.9	8.1	60	1.03	1.70	61
Excellent or good	2.2	3.4	65	0.29	0.38	76
Children						
All	2.3	3.3	70	0.21	0.26	81
Fair or poor	3.5	6.4	55	0.41	0.84	49
Excellent or good	2.1	3.1	68	0.19	0.21	90

* Relative use is the utilization of the uninsured divided by the utilization of the insured.

SOURCE: Stephen Long and Susan Marquis, "The Access Gap and the Cost of Universal Health Insurance," *Health Affairs* 13(2):211-20, Spring 1994.

their inferior health status.[44] They are sicker on admission to the hospital, use fewer costly discretionary services, and appear to have higher mortality rates.[45] The amount and type of insurance coverage, as well as income, are also associated with variation in use.[46]

Aged Medicare Beneficiaries' Insurance and Service Use

The extent of health insurance coverage is uneven among population groups. About 96 percent of people 65 and older are enrolled in Medicare, and many of those not covered by Medicare have other private or public insurance. Consequently, only about 1 percent of the elderly (some 350,000) were uninsured in 1994. Nevertheless, there is wide variation in supplemental insurance coverage even among Medicare beneficiaries, which influences use of services.[47]

Not all Medicare enrollees use services, but others make extensive use of the program's benefits. In an analysis of aged Medicare beneficiaries who lived in the community (rather than in nursing facilities) and were not enrolled in a managed care plan, almost 16 percent did not use services in 1992 (see Table 3-15).[48] Another 15 percent of this group had at least one hospital stay. Only about 3 percent of those who were hospitalized (less than 1 percent of all beneficiaries) subsequently used the skilled nursing facility benefit. Another 30 percent had physician visits only. The rest used a combination of ambulatory services, usually physician and hospital outpatient.

Patterns of service use appear to be influenced strongly by whether a beneficiary has supplemental insurance. More than 80 percent of aged Medicare fee-for-service beneficiaries who reside in the community also were covered by some form of private supplemental insurance through a current or former employer or an individually purchased medigap plan (see Table 3-16). About 9 percent had some coverage under Medicaid. The Medicaid program pays, at a minimum, Medicare premiums and cost sharing

Table 3-15. Community Residents: Medicare Beneficiary Patterns of Service Use, 1992 (In Percent)

Services	Percent
Total	100.0%
No services	15.7
No hospital inpatient	69.3
Physician only	30.0
Other combinations	39.3
Hospital inpatient and:	15.0
Physician	2.7
Physician and outpatient	7.5
Physician, outpatient, and home health	3.0
Skilled nursing facility and/or other services	0.5
Other combinations	1.3

Note: Includes aged beneficiaries who lived in the community (rather than facilities), were entitled to Part A and Part B, were not in a group health plan, and were enrolled in Medicare throughout 1992. Services included are hospital inpatient, hospital outpatient, physician, skilled nursing facility, and home health.

SOURCE: ProPAC analysis of data from the Health Care Financing Administration, Medicare Current Beneficiary Survey, 1992.

Table 3-16. Combinations of Services Used by Medicare Beneficiaries, by Supplemental Insurance Coverage, 1992 (In Percent)

Insurance Coverage	Total	No Use	Physician Only	Outpatient Combination*	Hospital Inpatient
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Medicare only	9.1	18.4	7.9	6.9	7.5
Medicare and:					
Employer-sponsored coverage	42.8	39.4	44.8	42.9	41.9
Medigap	37.6	33.5	38.8	38.8	36.1
Medicaid	9.4	7.5	7.1	10.3	13.5

Note: Includes aged beneficiaries who lived in the community (rather than facilities), were entitled to Part A and Part B, were not in a group health plan, and were enrolled in Medicare throughout 1992. Services included are hospital inpatient, hospital outpatient, physician, skilled nursing facility, and home health.

* Outpatient combination defined as physician services and either outpatient hospital or home health services.

SOURCE: ProPAC analysis of data from the Health Care Financing Administration, Medicare Current Beneficiary Survey, 1992.

for eligible Medicare enrollees. About 9 percent of Medicare beneficiaries had neither supplemental insurance coverage nor Medicaid and were liable for all Medicare's cost-sharing requirements.

A disproportionate share of non-users (almost 20 percent) were beneficiaries with Medicare coverage only. Medicaid coverage, on the other hand, appeared to be associated with higher rates of hospital use. More than 13 percent of those who used inpatient services had Medicaid coverage, even though they constituted less than 10 percent of the Medicare population. This association may be explained by the poorer health status and higher disability levels of the Medicaid population and, possibly, by hospital efforts to encourage eligible patients to enroll in Medicaid. Had aged beneficiaries in institutions been included in this analysis, hospital use rates would have been higher. Those in institutions use hospitals at twice the rate of those living in the community (see Table 3-17).

Choice of services varies by supplemental insurance coverage as well (see Table 3-18). While about 82 percent of aged Medicare beneficiaries living in the community visited a physician at least once in 1992, those covered only by Medicare used this service less often. By contrast, home health service use was similar regardless of supplemental coverage, perhaps because Medicare requires no coinsurance or deductible for this benefit. The pattern differed, however, for Medicare beneficiaries with Medicaid, whose usage rate for home health visits was higher than that for groups with private supplemental insurance, again most likely because of their poorer health status and greater level of disability. The probability of using this service and the number of services used per person were similar for beneficiaries with Medicaid coverage and those with Medicare only.

As others have found, African-American Medicare beneficiaries were less likely than whites to see physicians regardless of supplemental insurance coverage (see Table 3-19).[49] The pattern was less clear for other services.

Table 3-17. Facility Residents: Medicare Beneficiary Patterns of Service Use, 1992 (In Percent)

Services	Percent
Total	100.0%
No services	15.3
No hospital inpatient	51.4
Physician only	8.9
Other combinations	42.5
Hospital inpatient and:	33.3
Physician	1.4
Physician and outpatient	8.1
Physician, outpatient, and home health	2.6
Skilled nursing facility and/or other services	13.2
Other combinations	8.0

Note: Includes aged beneficiaries who lived in facilities (rather than the community), were entitled to Part A and Part B, were not in a group health plan, and were enrolled in Medicare throughout 1992. Services included are hospital inpatient, hospital outpatient, physician, skilled nursing facility, and home health.

SOURCE: ProPAC analysis of data from the Health Care Financing Administration, Medicare Current Beneficiary Survey, 1992.

Table 3-18. Medicare Beneficiaries' Use of Selected Services, by Supplemental Insurance Coverage, 1992 (In Percent)

Insurance Coverage	Physician	Hospital Outpatient	Home Health	Skilled Nursing	Hospital Inpatient
Total	81.8%	50.2%	6.1%	0.6%	14.8%
Medicare only	61.2	35.8	4.9	0.8	12.0
Medicare and:					
Employer-sponsored coverage	83.6	50.4	4.9	0.6	14.4
Medigap	84.2	51.1	5.3	0.5	14.5
Medicaid	83.8	59.5	15.8	1.0	21.3

Note: Includes aged beneficiaries who lived in the community (rather than facilities), were entitled to Part A and Part B, were not in a group health plan, and were enrolled in Medicare throughout 1992.

SOURCE: ProPAC analysis of data from the Health Care Financing Administration, Medicare Current Beneficiary Survey, 1992.

Insurance coverage usually was associated not only with whether any services were used but also with the number of services used. Beneficiaries with Medicare only have the sparest coverage and used the fewest services, except for services without cost sharing. Those with both Medicaid and Medicare were likelier to use services (and to use more of them), probably because of their higher disability levels and relatively poorer health status. Finally, some differences in use by race persist across insurance categories.

Managed Care and Vulnerable Populations' Access to Care

As discussed, comprehensiveness of benefits and cost sharing influence the number and type of services used. However, there are potential barriers to

Table 3-19. Medicare Beneficiaries' Service Use, by Supplemental Insurance Coverage and Race, 1992

Insurance Coverage/Race	Physician		Hospital Inpatient		Hospital Outpatient Use (In Percent)
	Percent Using	Visits Per Person Served	Percent Using	Stays Per Person Served	
Total					
White	82.5%	6.4	15.0%	1.5	50.2%
African American	74.1	6.7	13.1	1.5	50.5
Medicare only					
White	61.5	5.2	13.2	1.4	35.1
African American	59.1	4.4	8.9	1.5	38.1
Medicare and employer-sponsored					
White	83.7	6.3	14.4	1.4	50.2
African American	83.5	6.9	14.4	1.7	54.4
Medicare and Medigap					
White	84.7	6.2	14.7	1.5	51.2
African American	68.8	7.3	8.9	1.2	49.5
Medicare and Medicaid					
White	85.4	8.2	22.3	1.6	61.3
African American	80.8	7.7	18.6	1.6	58.7

Note: Includes aged beneficiaries who lived in the community (rather than facilities), were entitled to Part A and Part B, were not in a group health plan, and were enrolled in Medicare throughout 1992.

SOURCE: ProPAC analysis of data from the Health Care Financing Administration, Medicare Current Beneficiary Survey, 1992.

access even among those who have broad coverage and low cost sharing. When enrolled in plans that limit their provider choice, members may not be able to select the providers that are best able to meet their needs, including those clinics, hospitals, and physicians that traditionally have served them.

Medicaid managed care offers the opportunity to study vulnerable populations' access to care when they are enrolled in capitated managed care health plans with limited provider networks.[50] Many states have decided to exclude from mandatory enrollment in these plans Medicaid eligibles with disabilities. This is because of concern about whether health plans can meet disabled patients' specialized and extensive medical needs. Even among women and children who are eligible for Medicaid, however, some groups are vulnerable to access barriers because they do not speak English, have low education levels, lack transportation, live in areas with few health care providers, or have medical conditions that require specialized or expensive care. States that contract with capitated managed care health plans to care for groups of their Medicaid population have taken a variety of approaches to prevent, monitor, and correct access problems.

States are encouraging Medicaid managed care plans to contract with designated providers to ensure that enrollees have ongoing care with traditional providers and to counteract any incentives plans might have to avoid providers with costly patients. Some states are mandating that Medicaid managed care plans contract with certain providers. Others are evaluating contract bids based on the types of providers included in a plan's network (see Table 3-20). States use information on the characteristics of patients or services offered by providers in their selection. These providers include community health centers, children's hospitals, school-based health centers, or others that meet state criteria.

Table 3-20. Selected State Medicaid Managed Care Provider Contracting Requirements, 1994

State	Requirements
Arizona	• State has no formal requirements, but evaluates plans' responses to RFPs based on the variety of provider types in their networks.
Florida	• Plans must contract with regional perinatal intensive care centers for high-risk prenatal care and complex neonatal surgery.
Maryland	• The state has no formal or informal requirements.
Massachusetts	• The state requires linkages (not necessarily contractual) with school-based clinics. • Contracts with community providers are viewed favorably during the RFP process. • The state encourages coordination with public health clinics to serve persons with HIV/AIDS.
Minnesota	• Plans must contract with community health centers, including FQHCs. • Beginning in 1995, plans are required to contract with a children's mental health collaborative.
New York	• Contracts with community providers are viewed favorably during review of plan responses to Medicaid managed care RFPs.
Oregon	• Plans must contract with county health departments and other publicly funded programs to provide immunizations and screenings. • Plans are encouraged, but not required, to contract with public providers for maternity care case management, well-child care, prenatal care, school-based care, and other screening services.

Note: RFP = request for proposal. HIV = human immunodeficiency virus. AIDS = acquired immunodeficiency syndrome. FQHC = federally qualified health center.

SOURCE: Adapted from Project HOPE, *State Medicaid Managed Care Program Access Requirements*, ProPAC Extramural Technical Report, No. E-95-02, April 1995.

Another approach states are using to monitor the type and number of problems with access and quality of care is requiring plans to have formal grievance and complaint resolution processes and then reviewing the grievances and complaints that are filed (see Table 3-21). Many states oblige plans to educate enrollees about these processes and their rights. States also collect health care data from plans to identify both access and quality problems. Some mandate that plans transmit encounter data; others allow plans to prepare summary information to evaluate their performance on specified measures.

Table 3-21. Selected State Medicaid Managed Care Grievance and Complaint Requirements, 1994

State	Requirements
Arizona	• Plans must notify enrollees of grievance rights when they enroll. • Information about the process must be available in a language other than English if 200 (or 5 percent) of health plan's enrollees speak that language. • Health plans have a 45-day maximum for grievance resolution.
Florida	• Plans must notify enrollees of grievance rights when they enroll. • Information about the process must be included in orientation materials and translated into another language when necessary. • Health plans have two days (plus a 30-day extension if necessary) to resolve grievances.
Maryland	• Plans must notify enrollees of grievance rights when they enroll. • Grievances must be resolved in a timely manner.
Massachusetts	• Plans must notify enrollees of grievance rights when they enroll. • Grievances must be resolved in a timely manner.
Minnesota	• Plans must notify enrollees of grievance rights when they enroll. • Information about the process must be written at the seventh grade level and should be presented orally and in writing. • Health plans must notify the state ombudsman within three days after a written complaint is filed. Once notified, the ombudsman helps to resolve the complaint.
New York	• Plans must notify enrollees of grievance rights when they enroll. • Information about the process must be included in orientation materials and translated when necessary. • Health plans must respond to grievances in writing within 15 days of filing; if the grievance is not resolved by the twenty-fifth day from filing, the department of social services becomes involved. If the grievance is not resolved by forty-fifth day from filing, the department of social services becomes responsible for resolving the grievance. • The grievance and review committees must have one enrollee representative.
Oregon	• Plans must notify enrollees of grievance rights when they enroll. • Information about the process must be included in orientation materials and translated when necessary. • Health plans must resolve oral complaints within five days or notify enrollees of a 30-day delay and the reason for delay. • Health plans must resolve written complaints within 30 days of receipt unless further information is needed from the enrollee.

SOURCE: Adapted from Project HOPE, *State Medicaid Managed Care Program Access Requirements*, ProPAC Extramural Technical Report, No. E-95-02, April 1995.

Medicaid managed care plans independently have initiated programs and policies to help enrollees who might have problems accessing services. These include contracting with providers that meet enrollees' geographic and language needs, allowing certain enrollees to select a medical specialist to act as their primary care provider, offering transportation support and child care on site, and making special efforts to orient new enrollees to the health plan and to managed care in general. Plans vary in the degree to which they voluntarily pursue contracting arrangements with providers that historically have served vulnerable populations.

State payers are using a host of approaches to structure requirements for health plans in order to forestall possible access problems and to promote access to health care for Medicaid enrollees. Mandatory provider contracting is only one of these options. Many of the state policies relate to the structure of health plan operations. In addition, tools are being made available to states to monitor the processes of care in plans, through standards developed in the Medicaid Quality Assurance Reform Initiative and indicators from the Medicaid HEDIS project. Reliable and meaningful measurement of access and its impact on the health of the Medicaid managed care population, however, is much further behind.

CONCLUSIONS

Each of the major health care payers has responded to its rising costs by developing mechanisms to constrain this growth. These mechanisms include payment systems that limit the amounts they pay providers (through negotiations or prospectively set rates) or change the financial incentives they pass to the plans and providers. There is tremendous variation across payers, markets, and plans in the design and stringency of these cost-containment methods. Although all of the payers are adopting some managed care techniques, the degree to which they are doing so varies across areas and populations. Few payers are enrolling their most expensive long-term care populations in managed care plans.

As more people enroll in managed care plans and technological advances increase the number and types of procedures that can be delivered in alternative settings, provider practice patterns continue changing. Inpatient hospital services use is declining as more care is provided in post-acute and ambulatory settings.

The effects of these cost-containment initiatives on access and quality of care continue to be an important consideration. It is unclear whether these changes will improve or inhibit access as enrollees are redirected to network providers. Both the private and public sectors are developing systems to measure the quality of care, although much of this research is in its infancy. Private sector payers are using this information to negotiate contracts with plans and providers. Medicare and Medicaid are refining these tools to reflect their populations. Much remains to be learned about the trade-offs between cost, quality, and access as the American health care delivery and financing systems move more toward integration.

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47. Employee Benefit Research Institute, *Sources of Health Insurance and Characteristics of the Uninsured.*

48. All data on Medicare beneficiary patterns of service use are based on a ProPAC analysis of information from the 1992 Medicare Current Beneficiary Survey. Services included in the analysis were physician, hospital outpatient, home health, SNF, and hospital inpatient, as indicated by whether the beneficiary had a Medicare claim for the service. Other services, such as durable medical equipment and outpatient services provided outside hospitals and physician offices, were not included.

49. Health Care Financing Administration, *Report to Congress: Monitoring the Impact of Medicare Physician Payment Reform on Utilization and Access* (Washington DC: U.S. Government Printing Office, 1994).

50. The information presented here is summarized from Project HOPE's Center for Health Affairs, *Medicaid Managed Care Program Access Requirements*, ProPAC Extramural Technical Report, No. E-95-02, April 1995.

Chapter 4

Changing Relationships Among Providers

Chapter 4

Changing Relationships Among Providers

Changes in the financing and delivery of health care are blurring the traditional distinctions between payers and providers, and bringing about new relationships among various providers. In recent years, payers have become more aggressive in their attempts to rein in health care spending. Much of the impetus for this change originated with employer efforts to reduce employee health benefit costs by demanding lower insurance premiums. Insurance companies responded to these demands with new payment strategies that use various managed care techniques. As a result, providers increasingly are bearing more financial risk for the care they deliver.

The number and types of health care providers have proliferated as a result of growing technological capabilities as well as changes in practice patterns and payment policies. More services are now delivered in a wider variety of settings, thus shifting the emphasis away from inpatient care. Numerous providers, especially hospitals, have begun to restructure their relationships with other providers in efforts to secure their position in a market that is changing rapidly.

This chapter describes the emerging delivery system: Specifically, the newly forming relationships among health care providers are examined, along with some of the factors influencing the shape and direction of these changes. The first section discusses the delivery system, including the number and types of health care providers. Next, the factors influencing providers and how they are responding are presented. A detailed discussion of the changing relationships between hospitals and physicians follows. Antitrust and other regulatory issues are then considered. Finally, some implications for cost, quality, and access are discussed.

THE HEALTH CARE DELIVERY SYSTEM

Since 1980, the total number of hospitals has declined more than 7 percent (see Table 4-1). In 1993, there were fewer short-term community hospitals than in 1980, but the decline in the number of large hospitals was most dramatic; about one-fourth of hospitals with 400 or more beds downsized, merged, or closed over the period. There also were fewer government hospitals in 1993 than in 1980, although the number of psychiatric and proprietary hospitals had grown substantially. Hospital occupancy rates, on the other hand, slipped from 77.7 percent in 1980 to 67.3 percent in 1993, even though the number of hospital beds in the United States declined almost 15 percent during the period.[1]

Along with changes in payment policies, the drop in the use of inpatient services has resulted from advances in medical technology, such as less invasive surgical techniques. As a result, utilization of care in non-inpatient settings has grown dramatically. Ambulatory settings now offer services once provided only to inpatients, such as cataract extraction and lens implantation, hernia repair, and numerous radiological procedures. Consequently, hospital outpatient departments must compete with ambulatory surgical centers (ASCs) and other ambulatory providers for the delivery of these types of services. In 1995, there were 1,994 Medicare-certified ASCs, compared with 485 in 1986 (see Table 4-2).

Nonacute care facilities also have grown in number. Medicare-certified hospice programs, which administer palliative care to the dying, increased from 108 in 1986 to 1,770 in 1995. Medicare-certified nursing facility beds rose from fewer than 500,000 in 1989 to more than 615,000 in 1993, an increase exceeding 24 percent (see Table 4-3).

Table 4-1. U.S. Hospitals, by Category, Selected Years

Hospital Category	1980	1985	1990	1993	Percent Change 1980-1993
All hospitals	6,965	6,872	6,649	6,467	-7.2%
Short term	6,407	6,339	6,141	6,040	-5.7
Long-term	558	533	508	427	-23.5
General medical and surgical	6,105	5,961	5,566	5,369	-12.1
Psychiatric	558	629	774	760	36.2
Tuberculosis and other specialty	302	282	309	338	11.9
Community*	5,830	5,732	5,384	5,261	-9.8
Noncommunity	1,135	1,140	1,265	1,206	6.3
Number of beds:					
6-24 beds	327	267	301	290	-11.3
25-49 beds	1,209	1,134	1,095	1,065	-11.9
50-99 beds	1,674	1,666	1,633	1,554	-7.2
100-199 beds	1,567	1,618	1,562	1,582	1.0
200-299 beds	802	848	830	834	4.0
300-399 beds	484	507	503	471	-2.7
400-499 beds	334	301	276	253	-24.3
500+ beds	568	531	449	418	-26.4
Voluntary	3,505	3,544	3,388	3,338	-4.8
Proprietary	891	1,052	1,139	1,105	24.0
Federal government	359	343	337	316	-12.0
Nonfederal government	2,210	1,933	1,785	1,708	-22.7
Residency training	1,257	1,232	1,249	1,197	-4.8
Medical school affiliation	997	1,120	1,238	1,177	18.1
Council of Teaching Hospitals member	406	454	387	394	-3.0

* Community hospitals include nonfederal short-term general and some specialty hospitals.

SOURCE: American Hospital Association Annual Survey of Hospitals.

Between 1989 and 1993, the number of home health agencies went up 25.7 percent.

The growing number and types of providers, combined with changes in health care financing and declining inpatient utilization, have prompted hospitals to establish or expand non-inpatient services in attempts to secure market share. As a result, hospitals' non-inpatient capacities have greatly expanded. In 1985, only 54.1 percent had any type of organized outpatient services; by 1993, this had risen to 88.5 percent (see Table 4-4). Substantial increases also have occurred in the number of hospitals providing rehabilitation and home health services.

In addition, some hospitals are affiliating with managed care entities. Such contracts may furnish hospitals with a steady stream of patient referrals and ready-made relationships between different types of providers and a paying entity. The number of hospitals contracting with health maintenance organizations (HMOs) or preferred provider organizations (PPOs) has increased from 37.2 percent in 1985 to 66.7 percent in 1993 (see Table 4-5).

PROVIDER ORGANIZATION AND INTEGRATION

In response to the recent trends in health care financing and delivery, hospitals, physicians, and other providers are restructuring their relationships at an unprecedented rate. Consequently, various types of provider systems and network agreements are developing and proliferating. At one extreme, some have combined both provider and

Table 4-2. Medicare-Certified Facilities, Selected Years

Facility Type	1986	1990	1995
Psychiatric			
Hospitals	516	687	706
Distinct-part units	913	1,130	1,399
Rehabilitation			
Hospitals	75	135	195
Distinct-part units	470	687	829
Comprehensive outpatient rehabilitation facilities	82	199*	268
Hospice programs	108	1,037*	1,770
Ambulatory surgical centers	485	1,382*	1,994
Dialysis facilities	1,435	2,183*	2,747

* Indicates number of certified facilities in 1991.

SOURCE: Health Care Financing Administration, Office of Survey and Certification.

insurer functions to deliver the full spectrum of medical care services for a per capita payment. Others have formed delivery systems with more limited arrangements, involving affiliations among providers, including hospitals, physician practices, subacute facilities, and post-acute facilities.

This current restructuring of health care delivery is highly variable: Changes are occurring rapidly in some market areas, but more slowly in others. This activity is likely to continue for some time. Data documenting these changes are limited to trade literature descriptions and a few studies describing a city or geographic area. Further, there is little information regarding the effects of these changes on health care spending and the utilization of services.

Over the past year, the Prospective Payment Assessment Commission (ProPAC) has monitored the changing relationships among providers through ongoing discussions with health care researchers and industry representatives. The Comission also sponsored a national study that surveyed hospital-physician relations. This section describes these relationships, using examples of current provider restructuring to illustrate the range of activities. The examples cannot portray all the changes now occurring. Nor do they represent all providers' circumstances. Nevertheless, the major forces driving these activities are similar in many instances.

The health care delivery environment that may result from these changes can best be characterized as uncertain. Some attempts at provider reorganization and integration may have lasting, beneficial effects. In other instances, the restructuring efforts may not be sustainable or necessarily desirable. Given the unprecedented change occurring across the nation, however, these changes will have a significant effect on health care delivery.

This section first describes some of the influences on provider restructuring activities, addressing two key factors: local market conditions and the individual provider's goals. Provider responses to market changes then are discussed, including the geographic markets a provider targets and the provider's attempts to secure its position in those markets. There are several types of providers, and their perspectives on and individual responses to market changes differ markedly. For discussion

Table 4-3. Medicare-Certified Nursing Facilities and Home Health Agencies, Selected Years

Year	Medicare-Certified Nursing Facilities	Total Beds Available for Medicare	Medicare-Certified Home Health Agencies	All Home Health Agencies*
1989	8,285	495,237	5,676	11,097
1991	9,711	570,222	5,780	12,433
1993	10,370	615,725	6,497	13,951

* Includes home care aide organizations and non-Medicare certified hospices.

SOURCE: ProPAC analysis of Provider Service File data from the Health Care Financing Administration; and National Association for Home Care, *Basic Statistics About Home Care 1993.*

Table 4-4. Community Hospitals Providing Non-Inpatient and Skilled Nursing Services, by Location, Selected Years (In Percent)

Year	Any Organized Outpatient Services[a]	Surgery[b]	Psychiatric	Alcohol/Drug Dependency	Rehabilitation	Home Health	Skilled Nursing[c]
1985	54.1%	93.4%	15.3%	16.1%	39.3%	29.7%	18.8%
1990	85.2	94.7	19.6	20.5	51.5	35.6	22.3
1993	88.5	93.7	23.3	21.2	57.8	42.2	27.9

[a] Trends in responses may reflect, in part, a change in the survey question between 1985 and 1990.

[b] Hospitals may provide outpatient surgery without having an organized outpatient department.

[c] Data for 1985 reflect the presence of skilled nursing services anywhere in the hospital. Data for 1990 and 1993 reflect the presence of a separate skilled nursing unit.

SOURCE: American Hospital Association Annual Survey of Hospitals.

purposes, the influencing factors and provider responses are described and illustrated primarily from the viewpoint of the hospital.

Influencing Factors

The nature and extent of provider reorganization and integration activities are highly diverse, in part because a provider's situation may be affected by many factors. The most important of these are local market conditions and the individual provider's goals.

Local Market Conditions—The forces affecting the conditions of the local market differ greatly. Each market has unique characteristics, but the major influencing forces across markets are the involvement of the purchasers, provider capacity, and the size of the population.

Perhaps the strongest force driving integration in many markets is the continuing efforts by purchasers to reduce health benefit costs. In some markets, purchasers have contracted with managed care entities,

Table 4-5. Hospitals with Health Maintenance Organization and Preferred Provider Organization Contracts, by Hospital Category, Selected Years (In Percent)

Hospital Category	Any HMO			Any PPO			HMO or PPO		
	1985	1990	1993	1985	1990	1993	1985	1990	1993
All hospitals	30.6%	43.6%	50.4%	23.1%	48.3%	60.8%	37.2%	57.0%	66.7%
Community hospitals	33.1	48.1	55.2	25.3	52.9	66.3	40.4	62.5	73.1
Urban	52.9	70.8	76.6	39.7	70.3	80.3	61.5	81.3	87.1
Rural	18.6	21.3	27.0	8.8	32.2	48.7	37.2	57.0	54.7
New England	54.7	70.3	74.6	18.2	46.4	62.3	56.7	71.6	76.8
Middle Atlantic	37.3	56.9	71.4	9.3	37.2	57.7	40.5	64.8	77.9
South Atlantic	30.6	42.0	49.1	25.2	56.7	72.3	35.5	60.1	74.9
East North Central	48.8	67.9	71.9	37.2	72.0	80.0	57.0	82.2	85.9
East South Central	14.3	30.0	40.4	27.1	56.9	67.9	32.2	60.1	71.0
West North Central	25.4	37.3	38.9	13.1	34.2	51.6	28.7	45.9	58.4
West South Central	16.5	30.5	40.0	14.8	44.9	66.5	22.6	48.5	67.9
Mountain	25.7	39.9	46.5	27.7	45.4	52.6	34.4	48.5	56.4
Pacific	50.2	66.9	74.3	52.2	74.7	77.6	62.7	81.9	84.0
Voluntary	40.0	57.3	63.4	28.3	56.9	70.0	47.2	69.0	77.9
Proprietary	34.1	46.2	62.7	33.5	62.9	77.9	44.4	67.5	81.2
Government	17.3	28.0	32.9	15.1	39.0	53.7	23.7	45.4	58.4

Note: Trends in responses may reflect, in part, hospitals' increasing familiarity with HMO and PPO contracting over time; this may have increased the likelihood of positive survey responses. HMO = health maintenance organization. PPO = preferred provider organization.

SOURCE: American Hospital Association Annual Survey of Hospitals.

thus placing more financial risk on the insurers or the providers. The California Public Employees Retirement System (CalPERS) health benefit plan is illustrative. CalPERS covers approximately 900,000 people, representing almost 7 percent of the California health care market.[2] Thus, it has significant market power and leverage in contract negotiations. In 1993, CalPERS declined to include any indemnity plans among the 23 companies with which it contracted, opting to use only managed care plans. CalPERS also has implemented various strategies requiring these plans to reduce their premiums and accept a greater level of financial risk.

In any market, the role and influence of purchasers are determined by how aggressive or organized they have become in their attempts to reduce costs. Employer efforts in this regard range widely, from establishing traditional relationships with insurers to self-insuring. In addition, employers can act collaboratively. Banding together as purchasers, some are retaining an agency to contract with providers and manage benefits. By contracting for larger pools of employees, lower rates may be negotiated with providers.

Employer activities in a market area also can serve as a catalyst for other aspects of network development. In Cleveland, for example, the activities of two business coalitions have heightened local employers' expectations for provider accountability.[3] A coalition of small businesses, along with a group of local corporate chief executive officers, formed the Cleveland Health Quality Choice Program. This organization collects and analyzes data to inform local employers about the value received from the health care dollars they spend. The initiative has improved quality of care, as indicated by reductions in death rates and lengths of stay. Moreover, Cleveland is no longer among the 20 most expensive U.S. cities for the provision of health care.

In addition to the role played by purchasers, the number and types of health care providers influence local market conditions. Over the past few decades, many markets have witnessed remarkable growth in health services capacity. The declining rate of acute inpatient care, however, has led to significant overcapacity in several instances. The financial terms of contracts with purchasers can differ depending on the presence and degree of service overcapacity, which can lead hospitals and other providers to accept deep price discounts. As excess capacity diminishes, these discounts may no longer be available.

The need to reduce excess capacity can spur provider restructuring. The Minneapolis/St. Paul area, for instance, has seen drastic downsizing of its inpatient capacity.[4] In 1971, the area had 35 hospitals with almost 10,000 acute care beds. By 1990, the number of beds had dropped to roughly 7,500; by 1992, four multihospital systems owned most of the remaining hospitals.

The size of a market's population can also shape local market conditions. A densely populated area may be able to support the development and continued integration of numerous health care systems. By contrast, a market may not have a sufficient population to support even one integrated system. Such a small market will not reap the full benefits of competition.

Goals—Hospitals are in the business of delivering health care. To accomplish its mission, each hospital may aim to achieve a number of other goals, including solid financial performance, strong market share, and funding for and involvement in community service. The relative priorities of these goals differ among hospitals.

A hospital may choose to integrate with other providers if it perceives that the action may enhance achievement of its goals. For example, integration may be pursued if the hospital believes this will strengthen its revenue streams through contracts with large purchasers or reduce its costs through improved operating efficiencies. A hospital may also enter a network agreement to preserve its community ownership.

In some integration activity, the goals of a provider or system may conflict with the best interests of the market. Recent activity in the Kansas City metropolitan area is illustrative.[5] One system bought an urban county hospital that has an outpatient center in another county whose population is expected to grow rapidly in the future. The system plans to build a replacement hospital in the expanding county despite the current oversupply of hospital beds there. In this example, the provider system's long-term goal—securing market share—appears to conflict with overall market efficiency and cost containment in the short term.

Provider Responses

Given the changes in health care financing and purchasing, a provider must ensure its access to patients in order to meet its goals and stay in business. In the current health care environment, many providers are attempting to do this by targeting geographic markets and securing their positions in these markets.

Targeting Geographic Markets—As they have in the past, some providers are focusing their efforts on local markets; others are aiming at regional or national markets. However, in light of changes in purchaser practices, it has become even more important for providers to target their markets well: Many purchasers are negotiating contracts at the local market level, though some companies with employees nationwide are seeking provider systems that can deliver care in several markets under a single contract.

Local Market—Many providers target their efforts on servicing the local market. To obtain contracts with purchasers, hospitals are altering their relationships with other providers to integrate vertically. (Vertical integration is the ability to provide a broad continuum of care, including primary, acute, subacute, and post-acute services.)

The Henry Ford Health System (HFHS) in Detroit is an example of a delivery system that focuses on serving its local market. It has integrated vertically and incorporated insurance functions. The system includes a tertiary care hospital, two community hospitals, 37 ambulatory care facilities, two group practices totaling nearly 1,000 physicians, a mental health facility, a chemical dependency treatment center, and two nursing homes.[6] It also includes various home health services, pharmacies, and dialysis services. The system's HMO, the Health Alliance Plan, is rooted in the International Union of the United Auto Workers. In addition, through various partnerships with local businesses, HFHS is involved in numerous community improvement initiatives.

Although much of the provider integration activity has been in highly populated areas, some innovative activities also are occurring in rural markets. Wellsboro, Pennsylvania, illustrates. Laurel Health System was formed in this community to improve access and quality of care and to ensure financial survival for some of its component services.[7] The neighboring county had closed its mental health and human services programs, which were taken over by private citizens, including physicians. The merger of the only community hospital with these various ambulatory care and community services formed Laurel Health System. The system's long-term plans include the development of insurer functions so that it can be a contracting entity and keep financial resources within the community.

Regional or National Markets—Other provider entities have been operating regionally or nationally for years. Entities with multiple geographic markets include large HMOs, tertiary care referral centers, large insurance companies with their own primary care networks, and multihospital systems.

Large HMOs like Kaiser Permanente, which function in several markets, have captured statewide contracts. In an effort to remain competitive, however, California-based Kaiser recently decentralized some of its corporate functions to enhance its responsiveness on the local market level.[8] For example, although Kaiser traditionally has provided very few services out of plan, employer demands and growth in competing plans have led the HMO to allow enrollees more provider choices through point-of-service options in some markets.

Another type of provider with a regional or national market is the tertiary referral center. The Mayo Clinic in Rochester, Minnesota, which draws patients from several countries, is such an entity.[9] From its roots as a medical group practice, Mayo has broadened its scope of services in recent years and extended into other geographic areas. These changes are likely to augment its referral-based business with a broadened base of patients who receive all of their care from Mayo. In 1986, Mayo began to integrate vertically, merging with the two neighboring hospitals and later initiating partnerships with outlying group practices in Iowa, Wisconsin, and Minnesota. Mayo has further extended its market presence by developing satellite clinics in Jacksonville, Florida, and Scottsdale, Arizona. It also has a reference laboratory for specimen analysis that is used by scientists worldwide.

Large insurance companies active in health care markets nationwide are also implementing a number of strategies to remain competitive. Some are broadening their functions to include provision of health care services. For example, Aetna Health Plans and Prudential Health Care System are developing their own primary care networks, complete with physicians and clinics. Their objectives are to build up their primary care bases and then use this leverage in contracting for hospital and specialist physician services in several select market areas. Additionally, various Blue Cross and Blue Shield plans are forming joint ventures with providers in numerous markets.

Multihospital systems grew in number and size during the 1980s, in efforts to achieve economies of scope and scale by owning several providers of the same services across markets. These systems include investor-owned companies as well as not-for-profit systems. In the past year and a half, several large investor-owned companies have accomplished major mergers or acquisitions. Columbia Healthcare Corporation, for instance, merged with Hospital Corporation of America to form Columbia/HCA, a chain of 192 hospitals. In addition, National Medical Enterprises recently bought American Medical International, to form the Tenet Healthcare Corporation. Although their traditional focus has been on ownership and acquisition of hospitals, these companies also have begun to integrate vertically. Such organizations are in a strong position to acquire or contract with other providers in a market.

Securing Market Position—The more integrated provider-insurer organizations (such as Kaiser Permanente, Group Health Cooperative of Puget Sound, and Henry Ford Health System, among others) are attempting to secure their market position through contracts with purchasers. However, many providers are pursuing other strategies in response to, or in anticipation of, growing demands by purchasers. Two strategies used by many hospitals are strengthening relationships with primary care physicians and integrating vertically with other types of providers.

A provider organization may have an advantage in securing market position if it can attract and retain primary care physicians, who are considered the crucial link to a sufficient patient base. Current market forces provide strong incentives for hospitals to align more closely with physicians, though stronger hospital-physician organizational relationships can benefit physicians as well. Such links give hospitals and specialty physicians access to patients through primary care physicians. They also give doctors access to necessary capital, including facilities, technology, staff, and administrative support.

Some hospitals and physicians are aligning by forming physician-hospital organizations (PHOs). A 1994 study sponsored by the American Medical Association (AMA) surveyed 40 PHOs and conducted follow-up case studies of eight of these.[10] All described their organizations as joint ventures owned and governed equally by the physicians and the hospital. By late 1993, 15 percent of all U.S. hospitals had formed some type of PHO, according to ProPAC's recent survey (see Table 4-6).[11] These hospitals were likelier to be urban, teaching, or voluntary facilities or to be located in the Atlantic region. In addition, hospitals with at least 200 beds were more likely to have established a PHO.

Table 4-6. Physician-Hospital Organizations by Hospital Category, 1993

Hospital Category	Percentage of Hospitals
All hospitals	15%
Urban	22
Rural	7
Major teaching[a]	20
Other teaching	26
Non-teaching	13
Atlantic[b]	21
East Central[c]	14
Far West[d]	12
West Central[e]	11
Voluntary	18
Proprietary	15
Government	9

[a] Major teaching hospitals have at least 25 residents per 100 beds.

[b] New England, Puerto Rico, Middle Atlantic, and South Atlantic census divisions.

[c] East North Central and East South Central census divisions.

[d] Pacific and Mountain census divisions.

[e] West North Central and West South Central census divisions.

SOURCE: Survey of Hospital-Physician Relations conducted by MACRO International Inc., under contract to ProPAC.

Table 4-7. Reasons for Starting a Physician-Hospital Organization

Reason	Percentage of Physician-Hospital Organizations Responding Yes
Contracting with managed care organizations	88%
Hospital collaboration with medical staff	77
Enhancing quality of care	63
Sharing financial risk	61
Improving the relationship between participating hospitals and physicians	60
Direct contracting with employers	52

SOURCE: Ernst & Young, *Physician-Hospital Organizations: Profile 1995.*

PHOs are formed for various reasons, as found in another 1994 survey of 189 such organizations.[12] The most commonly cited include contracting with managed care organizations, fostering collaboration between the hospital and physicians, enhancing quality, and sharing financial risk (see Table 4-7). The extent to which PHOs will enable hospitals and physicians to secure their market position is unclear, however, as many have been unable to attract enough primary care physicians.[13]

A number of physicians are choosing to position themselves in the market by forming alliances with other physicians rather than by aligning with hospitals. In some instances, they have developed a local network of primary care and specialist physicians, and then marketed their group to managed care plans and other purchasers. Some have organized further by creating or acquiring physician networks in multiple markets, or developing their own managed care product for direct contracting with employers. Coastal Healthcare Group, Inc., based in Durham, North Carolina, and PhyCor, Inc., in Nashville, Tennessee, are two such organizations. They are pursuing risk-based agreements with purchasers, and contracting with hospitals and other types of providers to furnish the full set of services desired by purchasers.

Hospitals are also strengthening their market position by integrating vertically with other types of providers. The trend toward vertical integration results partly from the proliferation in the number and types of providers that deliver care outside of the acute care inpatient setting. As an increasing volume of services are furnished in a wider variety of settings, the perception of hospitals as the chief providers of care has diminished. Many now view hospital inpatient care as only one of numerous inputs in the mix of health care services.

Vertical integration among providers is resulting in various sized delivery systems with different objectives. This activity often does not use ownership as the vehicle for integration. Rather, many providers are establishing network arrangements with one another to deliver a set of vertically integrated services. Some are integrating incrementally, but intend to eventually furnish a comprehensive set of health care services and perhaps even take on insurer functions as well. Others have opted to integrate on a limited basis, with the goal of being a subcontractor to (or being incorporated by) a larger entity.

The degree of integration and types of contracts of these provider systems and networks may reflect their local market conditions. For example, in its survey of PHOs, the AMA found that the organizations were more likely to contract on a discounted fee-for-service basis if PPOs were the most prevalent type of managed care plan in their market area. By contrast, PHOs in market areas with a higher proportion of HMO enrollment were likelier to be in risk-based contracts.

HOSPITAL-PHYSICIAN RELATIONS

With the growing volume of care being furnished outside the acute inpatient setting, many providers and purchasers are focusing more of their energies on the entire spectrum of services rather than just hospital inpatient care. Nonetheless, the acute care hospital remains the predominant type of health care facility and continues to account for the largest share of health care spending. The financial performance of these facilities rests on many factors. One of the most important is the medical staff: Physicians' clinical care decisions have a major and direct effect on hospital revenues and expenditures. Thus, hospitals' efforts to constrain their costs are necessitating changes in the hospital-physician relationship.

The integration of clinical services is a key component of efficient and effective health care delivery.[14] Clinical services integration is the extent to which patient services are coordinated across settings and sites of care, resulting in "seamless" delivery. It includes the coordination of key administrative support functions and activities; however, physician participation is the crucial element in the integration of clinical services.

A number of hospital management strategies are being used in efforts to achieve such care. These programs and practices often focus on involving the medical staff members in hospital financial decision making to educate and motivate them to practice more cost-effective medicine. In some cases, hospitals are also attempting to have physicians bear direct financial responsibility for the care they deliver. To contain costs and improve service delivery, some strategies entail establishing clinical treatment protocols and quality improvement programs. Others, like the development of integrated information systems, are needed for effective program implementation, operations, and evaluation.

In 1993, ProPAC conducted a national survey of hospitals to assess whether they were using these strategies and the extent to which they have involved their medical staffs in such activities. The survey results indicate that many hospitals and their physicians had begun to implement one or more strategies to contain hospital costs and improve service delivery. Few, however, had integrated a large share of their medical staffs into these programs.

Most hospitals involved their physicians in the capital budgeting process and shared with them the institution's financial data (see Table 4-8). Fewer hospitals (42 percent) supplied their physicians with price or cost information on major ancillary procedures. Some hospitals (40 percent) held the major clinical department heads accountable for the profits and losses generated by that service.

Use of physician education programs regarding clinical decision making may reduce excess costs and improve service delivery. It is widely believed that physician initiation or leadership of such activities enhances program effectiveness. However, only 45 percent of hospitals had their own internal

Table 4-8. Select Strategies Used to Improve Hospital Financial Performance and Service Delivery

Strategy	Percentage of Hospitals
Medical staff involved in hospital capital budgeting process	87%
Medical staff given hospital financial data	70
Medical staff given price or cost information of major ancillary services	42
Major clinical department heads accountable for profits/losses generated by their services	40
Hospital profiles each medical staff member	54
Hospital began profiling fewer than five years ago	64
Profile includes the number of admissions	91
Profile includes the average length of stay	80
Profile includes malpractice claims, judgments, or settlements	78
Profile includes the performance of certain clinical procedures	74
Profile shared with the individual physician	77
Profile based on peer comparisons	56
Profile used to decide on reappointment	63
Profile used in individual education programs	55
Hospital has formal TQM/CQI program	78
More than 20 percent of medical staff participate	35
Led by a medical staff member	32
Hospital information systems integrate clinical and financial data	49
Hospital information systems integrate clinical departments	36
Clinical practice guidelines disseminated by a physician	31
Medical staff has clinical practice guidelines development program	45

SOURCE: Survey of Hospital-Physician Relations conducted by MACRO International Inc., under contract to ProPAC.

program for physician-developed practice guidelines. Likewise, only a third had designated a physician to disseminate any practice guidelines to their medical staffs.

Physician profiling is another educational program. Through data collection, profiling compares physician practice patterns on various cost, service use, or quality dimensions. In 1993, profiling was used in just over half of all hospitals. Two-thirds had been profiling for fewer than five years. The four measures most often profiled were admissions; average length of stay; malpractice claims, judgments, and settlements; and decisions to perform certain clinical procedures. The profile information was shared with the individual physician in a majority of these hospitals. About two-thirds of these hospitals considered the results in making reappointment decisions; half used the information for physician education.

Almost 80 percent of all hospitals had implemented formal quality programs, such as total quality management (TQM) or continuous quality improvement (CQI), to achieve more effective delivery of care. However, only 35 percent of the programs had more than one in five physicians participating. Moreover, only a third of the programs were led by a physician.

Integrated information systems are necessary to monitor hospital operations and expenditures, implement physician profiling and other programs, and meet payers' reporting requirements. Only about half of all hospitals had integrated clinical and financial data systems by 1993, and only one in three had integrated its clinical departments' information systems. Not surprisingly, teaching hospitals and hospitals with at least 200 beds were more likely to have accomplished this.

Hospitals that were government-owned, rural, or had fewer than 50 beds often were slower to adopt such strategies. These types of facilities were less likely to involve physicians in the capital budgeting process, use practice guidelines or profiling, have TQM or CQI programs, or have integrated information systems.

These findings indicate that hospitals are employing multiple management strategies in efforts to contain costs and improve service delivery. Most of these strategies have been adopted quite recently, however, and physician participation is limited. In many respects, these strategies require fundamental changes in the manner in which medicine is practiced and in the relationships between hospitals and physicians.

REGULATORY CONSIDERATIONS

Even as providers are pursuing major changes in their relationships, there is a great deal of uncertainty about how regulators will respond. Regulations and rulings on various issues like antitrust, physician self-referral, or tax exemption can complicate or even inhibit the formation of new, more efficient relationships among providers.

Historically, regulatory scrutiny in the health care arena has focused on the actions of providers of similar services, such as competing hospitals or physicians. Accordingly, competition was viewed as occurring among hospitals or physicians, but generally not between hospitals and physicians. Thus, hospitals were thought to have little influence over purchasing decisions in other markets, such as post-acute services. The recent provider integration activities blur the lines that distinguish the markets for different types of care, however, and raise issues regarding the nature and extent of competition in the health care marketplace.

Policy makers are responding to the changes in health care financing and delivery in efforts to balance potential gains against possible detrimental effects. This section highlights several such considerations, including antitrust, physician self-referral, and other related issues.

Antitrust

Arrangements between competing firms that reduce or threaten competition are subject to scrutiny by both Federal and state agencies. In addition, firms and providers that perceive they have been harmed by anticompetitive behavior may seek redress through private antitrust lawsuits. This discussion describes activities at the Federal level.

The Department of Justice (DOJ) and the Federal Trade Commission (FTC) share responsibility in maintaining the conditions of a competitive market, as specified under Federal antitrust statutes. To make the potential for legal challenges more

predictable and reduce some of the uncertainty associated with antitrust law, the DOJ and FTC in 1994 issued nine joint policy statements ("guidelines").[15] These guidelines set forth enforcement policies for hospital mergers, joint ventures, and multiprovider networks. They establish several "safety zones" (circumstances under which the government will not challenge conduct under the antitrust laws). For situations that do not fall within a safety zone, the guidelines provide a broad analytic framework and principles that are used to evaluate the competitive effects of the activity in question.

The guidelines reflect the Federal government's attempt to balance the procompetitive effects of these activities against their anticompetitive potential. The DOJ and FTC will evaluate the competitive effects of a network in each of the relevant markets where it operates. These include the market for the network itself, as well as the markets for each of the services offered by the network that are (or could be) sold separately outside the network.

Physician Self-Referral

Policy makers at both the Federal and state levels are also concerned about physician self-referral—the potential for inappropriately using (or overusing) services because of a possible conflict between a physician's authority to act on behalf of patients and the physician's economic interest in other health care entities. Federal laws prohibit physicians from referring Medicare and Medicaid patients to health facilities that provide one or more designated health services if the physicians might gain financially by using the facility. This financial interest may be ownership (direct or indirect), investment, or compensation. This ban covers 11 clinical services. Some 27 states have enacted various physician self-referral laws to supplement these Federal restrictions.[16]

Other Related Issues

Other regulatory activities also may affect providers' decisions in the formation and operations of networks. The Internal Revenue Service is focusing on integration activities between not-for-profit and proprietary firms. Integration of a community hospital with physician practices is but one example. The underlying concern is that hospital-physician ventures present opportunities for physicians to invest and earn income, creating a private benefit from a public charity. In addition, a number of states have enacted "any willing provider" laws, which may limit a network's ability to choose member hospitals and physicians. Finally, for some smaller-scale provider systems, a number of states have issued waivers regarding the level of financial reserves required to bear risk in contracting.

IMPLICATIONS OF MARKET CHANGE

This chapter has described the effects of recent changes in health care financing and delivery on the restructuring of provider relationships. This phenomenon varies markedly across types of providers and markets: Change is rapid in some cases, but slow in others. Certainly, if the current trend toward provider integration continues, future delivery of health care in the United States will differ dramatically. These results may be mixed, however. While the changes may have desirable effects on cost, access, and quality, the new environment may also cause concerns in these areas.

Cost

Widespread development of integrated provider systems may reduce the cost of delivering services by improving efficiency. By furnishing a continuum of services under large contracts with purchasers, a system can achieve greater economies of scope and scale. Better coordination of care can reduce excess capacity and service duplication. Use of clinical practice guidelines and other programs to educate physicians is spreading as payers and managers of provider networks try to induce physicians to practice cost-effective, higher-quality medicine.

Systemwide cost savings achieved through widespread integration, however, may not be sustainable: Many of the gains realized through elimination of overcapacity may be one-time savings. Whether the various integrated provider systems and network agreements can contain costs in the longer term is unknown. Although savings already are being realized, they are occurring in an environment of pluralistic financing methods. Providers currently are able to cover losses from one payer with higher payments from another, effectively reducing their financial burden. But as their ability to do this continues to diminish, providers may find it more difficult to deliver care to the uninsured and underinsured.

Moreover, systemwide cost savings thought attainable through widespread integration may not be realized in full. Through integration, some providers seek to secure or strengthen their market share to exert monopoly control in an area. Provider systems that can achieve this degree of leverage may choose to keep the cost savings rather than pass them on to consumers through lower prices.

In highly competitive markets, providers will have to implement aggressive cost-containment strategies. Such activities may include changes in employee mix or reductions in some types of health care professionals and workers.

Access

Growth in provider integration may make available a broader set of services for more people, without the incentive for overuse that is inherent in the current fragmented, cost-based payment system. However, patients' choice of providers may be narrowed. Moreover, the availability and use of certain diagnostic and treatment capabilities may be delayed or reduced.

With market volatility likely to continue for several years, some partnerships and agreements among providers and between providers and payers may be terminated. When contracts are under dispute or providers are "deselected" by payers, enrollees may experience periods of disruption in their care or coverage.

Some markets may not be desirable for provider systems or payers looking to expand their economic bases. In an inner-city setting, for example, there could be too few covered lives (and too high a proportion of uninsured). Rural areas also may be less attractive because they have smaller populations and longer travel times for obtaining care. Under such market conditions, the benefits of competition would not be realized. This may make services for inner-city and rural populations less available and more expensive.

Quality

The changing relationships among providers may also affect quality. On the one hand, these new relationships may result in delivery of more appropriate care or in greater continuity of care. They could also lead to a greater emphasis on prevention and patient involvement in care. Further, the use of quality measurements is important to numerous purchasers and is a marketing tool used by many plans.

The recent changes in payment methods and delivery systems could affect quality of care adversely, however. Development of the physician-patient relationship over time facilitates continuity of care and may enhance a patient's acceptance of responsibility for his or her health. Disruption of effective physician-patient relationships undermines this cornerstone of good health care delivery. If this relationship is severed when someone enrolls in a plan, or if plans deselect physicians capriciously, continuity of care may be compromised.

The emerging provider-insurer organizations and some of the more integrated provider systems have secured contracts to provide the full spectrum of care for per capita payments. By shifting financial risk to the providers in this manner, an incentive for underuse is created. Although such contracts have heightened provider accountability, quality and desired outcomes are not guaranteed. This creates a responsibility for purchasers to ensure that providers are furnishing adequate care, and, more generally, to monitor any overall effects associated with this incentive for underuse.

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Chapter 5

State Health Care Costs, Payments, and Reforms

Chapter 5

State Health Care Costs, Payments, and Reforms

The delivery and financing of health care services vary substantially across the country because of geographic differences in population characteristics, economic conditions, the supply and organization of providers, and the configuration of payers. The health care system is undergoing enormous changes, and the type and pace of these changes reflect the characteristics of each location. Further, with the Congress's decision not to implement comprehensive health reform last year, the impact of local decision making in determining the organization and financing of health care will likely be greater than ever in the future. The diversity in approaches for delivering care, and perhaps the cost effectiveness of the results, may also be unprecedented.

For these reasons, it is important that Federal policy makers understand the heterogeneous environment in which the Medicare program operates as Medicare policy is formulated. The state is a key unit of analysis for understanding this environment. States are diverse in most of the demographic, economic, and health system factors that affect health spending, and state government policies also influence the health care sector.

To understand the implications of actions taken by providers, payers, and policy makers at the state level, it is important to examine each state's per capita cost of health care as well as the payments made for that care. Information on the costs of and payments for care in a particular state, and the factors that determine how these compare with other states, will help local decision makers devise strategies to control costs. At the national level, per capita data on all 50 states will help in assessing the relative effectiveness of different financing and delivery approaches over time.

Another potential use of per capita cost data and analysis of the factors contributing to variation across states is in the development of per capita payment rates. This is particularly true for the Medicare program, where a capitated rate is used for each area of the country to implement its managed care program. In developing capitated rates for different geographic areas (or for any defined population), the challenge is to decide which cost-influencing factors should be accounted for in the payment system.

Focusing on the aged Medicare population, the Prospective Payment Assessment Commission (ProPAC) has developed a series of per enrollee measures that permit more accurate comparisons of the resources states devote to providing health care than have formerly been available. The application of these measures to 1991 Medicare data, documenting the degree of variation and the influence of several important variables determining that variation, is presented in the first section of this chapter.

The second section addresses the interaction of costs and payments for hospital care among the major payers—Medicare, Medicaid, and private insurers—along with uncompensated care. The measures ProPAC has developed for this analysis also permit comparison across states as well as among payers.

The penetration of managed care across the states, in Medicare and Medicaid as well as in the private sector, is discussed in the third section. This includes the relationship between private sector managed care enrollment at the state level and growth in per capita hospital expenses since 1980. The last section provides an overview of recent state reform activities and discusses available information on how these activities affect health spending.

STATE VARIATION IN HEALTH CARE COSTS

ProPAC's "standardized resource costs per enrollee" makes it possible to compare the

Table 5-1. Measures Used in the Analysis of Medicare Costs and Payments Per Aged Enrollee

Standardized Resource Costs—The costs of resources used to provide health care services covered by the Medicare program and received by aged beneficiaries, measured to allow consistent comparison of states or other geographic areas. Geographic comparison is enhanced by:

- Covering all resources devoted to treating aged Medicare-eligible patients, including those paid for by the Medicare program, by beneficiaries (or a private insurer or Medicaid on their behalf), and by the Departments of Defense and Veterans Affairs when their facilities provide the services.
- Excluding the cost of graduate medical education programs.
- Adjusting the cost of resources for geographic differences in the prices of the goods and services used by providers (input prices) and the age and sex of the beneficiaries served.

Resource Costs—The actual costs of treating aged Medicare patients. Like standardized resource costs, this measure includes all resources used in providing Medicare-covered patient care and excludes graduate medical education expenses, but it is not adjusted for geographic differences in input prices and beneficiary age and sex.

Program Spending—The payments Medicare makes for covered health care services, including explicit payments for graduate medical education in the hospital inpatient and outpatient settings. Program spending does not reflect payments made by or on behalf of Medicare beneficiaries or include services provided in facilities operated by the Departments of Defense and Veterans Affairs.

Volume of Services and Cost Per Unit of Service—The number of service units per aged enrollee and the cost of each service unit, which together determine total standardized resource costs per aged enrollee. Due to the lack of reliable output measures for ambulatory care, these measures were applied only to hospital inpatient, skilled nursing facility, and home health agency services. The volume measure is adjusted for geographic differences in the age and sex of beneficiaries, and the cost per unit of service measure is based on standardized resource costs as defined above.

Utilization Index—A measure of utilization that can be summed across all settings, developed by valuing all units of service at national average Medicare payment rates. With payment rates held constant, all variation in the resulting adjusted payments per enrollee measure must be due to differences in utilization broadly defined to include the number and intensity of services. The index values shown then relate each state's adjusted payments per enrollee to the national average.

resources devoted to treating Medicare beneficiaries 65 and over in each state. This measure is explained below (and in Table 5-1), followed by the results of its application to the aged Medicare population. Factors potentially explaining state-level differences in standardized resource costs per enrollee, variation by health care setting, and the contribution of volume and cost per unit of service differences are subsequently addressed. Lastly, the variation in each of the factors that was accounted for in developing the standardized resource cost measure is presented.

The Concept of Standardized Resource Costs

Standardized resource costs per enrollee represent the average amount of resources used to provide health care to aged Medicare beneficiaries living in each state, measured in a consistent way to enhance comparison across states or other geographic areas. It begins with the costs incurred by all non-Federal providers in delivering Medicare-covered services to each state's beneficiaries.[1] But Medicare enrollees also obtain services in facilities operated by the Departments of Defense (DoD) and Veterans Affairs (VA), which Medicare would have covered had they been provided elsewhere. Therefore, an estimate of the resources that non-Federal providers would have expended to treat aged beneficiaries in each state in the absence of the military and VA systems was added to the cost value.[2] In this way, the measure captures all of the resources used in providing covered services to the nation's elderly Medicare population.

Standardized resource costs omit the direct expenses of hospital intern and resident programs. Although Medicare covers its share of graduate medical education (GME) expenses as part of its inpatient and outpatient payments, these costs were considered as primarily devoted to education rather than patient care. Any indirect effects of teaching on hospital costs (such as a greater intensity of ancillary services ordered by residents) are still reflected, however.

Finally, the standardized resource cost measure controls for two factors that cause substantial variation in provider costs across geographic areas and yet are generally considered outside the control of the health care system. These are the prices of the

goods and services providers must buy (or input prices) and the age and sex of beneficiaries.[3] Even among those over 65, per person medical care costs rise with age, and on average they are higher for men than for women.

ProPAC also measured resource costs per enrollee exclusive of GME expenses, but without adjusting for input prices and age and sex. This measure represents the actual per person costs incurred by non-Federal providers in treating aged Medicare beneficiaries, plus an estimate of the costs they would have incurred in the absence of the DoD and VA health care systems. Comparing this measure to standardized resource costs illustrates the impact of input prices and the age and sex composition of the enrollee population on provider costs in each state.

Variation in Standardized Resource Costs Per Enrollee

The level of resources used to treat elderly Medicare beneficiaries, as measured by standardized resource costs per enrollee, varied substantially across states in 1991. The states with the highest and lowest standardized costs are discussed below. State-level variation in the standardized measure is then contrasted with the variation before adjusting for input prices and age and sex. This is followed by comparing the resource costs measure with Medicare program spending.

State Comparisons of Standardized Resource Costs Per Enrollee—Oregon had the lowest standardized resource costs in 1991, followed closely by Hawaii (see Table 5-2). Both of these states were about 24 percent below the national average, while the third lowest state, Utah, was about 21 percent less than average. Six of the lowest 10 states are located in the West, but one midwestern state (Minnesota) and three eastern states (New Hampshire, Rhode Island, and Maine) are also represented. Some of the states that generally are considered leaders in either private market or government-sponsored reform are among the lowest in standardized costs, including Oregon, Hawaii, and Minnesota. But other low cost states, such as New Hampshire and Idaho, continue to have largely unregulated health care financing systems dominated by fee-for-service care.

The six states with the highest standardized resource costs per enrollee—Louisiana, Alabama, Mississippi, Florida, Tennessee, and Georgia—are all located in the South, and two more southern states—Texas and Kentucky—are among the highest 10. Louisiana's standardized costs were almost 9 percent higher than any other state and 25 percent above the national average. Maryland is ranked seventh highest, which is of particular interest in light of its having the nation's only all-payer hospital rate-setting system. It must be remembered, however, that rate setting acts primarily to control the rate of increase in hospital costs per case, and Maryland has had among the lowest per case growth rates for more than 15 years.[4]

Resource Costs Relative to Standardized Resource Costs—Interestingly, Oregon is the lowest cost state and Louisiana the highest on both the resource cost and standardized resource cost measures. However, because Oregon has above-average input prices and Louisiana has below-average prices, the difference between the two is significantly wider after standardization.

Among the other states, the importance of the adjustments made in estimating standardized resource costs is shown by the substantial differences in relative costliness that result from using the two measures. Five states with actual resource costs averaging 5 percent higher than the national average were found to be 6 percent below average after the two adjustments were made—Alaska, New Jersey, New York, Connecticut, and Massachusetts. In addition, Hawaii went from about 15 percent below the national average on actual resource costs to 24 percent below on the standardized measure, and California went from 13 percent above average to almost even with the average. Traditionally, all of these states have been regarded as among the most costly, which shows how strong an influence input prices have and how important standardization is to meaningful geographic comparison.

At the same time, seven other states went from below average in actual resource costs to well above average on the standardized measure, and Alabama went from marginally higher than average to almost 15 percent higher. These states, which generally are located in the southern and Plains regions, include all of those with the lowest input prices except North

Table 5-2. Medicare Resource Costs Per Aged Enrollee and Program Spending Rank, by State, 1991

State	Standardized Resource Costs		Resource Costs		Program Spending Rank
	Rank	Costs	Rank	Costs	
National average	—	$4,338	—	$4,338	—
Oregon	1	3,313	1	3,261	9
Hawaii	2	3,317	12	3,686	5
Utah	3	3,444	2	3,327	3
New Hampshire	4	3,490	10	3,667	10
Minnesota	5	3,492	5	3,500	14
Idaho	6	3,589	3	3,357	2
New Mexico	7	3,652	4	3,428	7
Rhode Island	8	3,679	21	3,899	34
Washington	9	3,705	16	3,763	22
Maine	10	3,719	7	3,545	11
Nebraska	11	3,733	6	3,511	1
Wisconsin	12	3,758	9	3,616	16
Vermont	13	3,794	8	3,551	8
Alaska	14	3,960	38	4,443	39
Iowa	15	3,976	11	3,679	12
Colorado	16	4,003	22	3,932	20
New Jersey	17	4,051	40	4,481	42
North Carolina	18	4,068	15	3,761	18
New York	19	4,069	42	4,521	44
Montana	20	4,072	14	3,734	13
North Dakota	21	4,103	18	3,789	15
Connecticut	22	4,122	45	4,665	43
South Carolina	23	4,136	13	3,730	6
Kansas	24	4,193	23	3,940	21
Arizona	25	4,211	29	4,178	36
South Dakota	26	4,233	17	3,784	4
Delaware	27	4,251	32	4,218	31
Oklahoma	28	4,255	19	3,854	24
Michigan	29	4,274	35	4,389	41
Indiana	30	4,278	26	4,034	23
Massachusetts	31	4,281	46	4,668	48
Wyoming	32	4,294	20	3,875	17
California	33	4,361	49	4,897	50
Ohio	34	4,389	33	4,229	33
Virginia	35	4,411	27	4,080	19
Missouri	36	4,412	30	4,185	26
Arkansas	37	4,507	24	3,984	27
Nevada	38	4,525	44	4,571	30
West Virginia	39	4,527	28	4,119	25
Illinois	40	4,535	41	4,503	38
Kentucky	41	4,578	31	4,204	28
Pennsylvania	42	4,594	43	4,552	46
Texas	43	4,643	39	4,460	32
Maryland	44	4,698	47	4,687	49
Georgia	45	4,702	36	4,418	40
Tennessee	46	4,708	34	4,355	35
Florida	47	4,735	48	4,794	45
Mississippi	48	4,750	25	4,015	29
Alabama	49	4,981	37	4,428	37
Louisiana	50	5,412	50	5,067	47

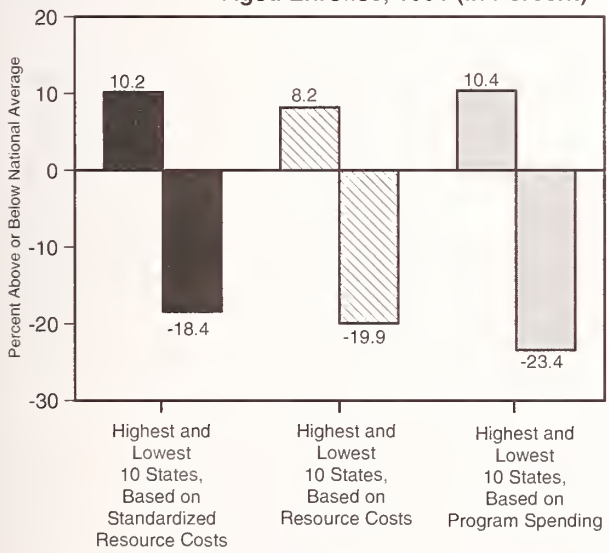
Note: Standardized resource costs, resource costs, and program spending are defined in Table 5-1. All three measures are aggregated by the state of patient residence. The state with the lowest costs or spending is ranked number 1.

SOURCE: ProPAC analysis using data from the Health Care Financing Administration, Office of the Actuary, Bureau of Data Management and Strategy, and Office of Managed Care; and the Departments of Defense and Veterans Affairs.

Dakota, whose low prices are offset by its having the oldest beneficiary population in the country.

It would be reasonable to expect that after controlling for two of the most important factors causing geographic differences—input prices and age and sex—variation in standardized resource costs would be less than that for actual resource costs. But this was not found to be the case. The range between the highest and lowest 10 states on these measures was the same—about 28 percentage points (see Figure 5-1). Even compared with the program payments measure (which, as discussed below, has only a limited correlation to resource costs by design) the range of variation in standardized resource costs is only modestly less. This implies that the sizable differences in health care costs among the states suggested for years by other measures are not merely an artifact of measurement technique. At least for the aged, there is great variation in the underlying costliness of health care in different parts of the country, even though some of the states identified as the least and most costly are different when resource costs are standardized.

Figure 5-1. Range of State-Level Variation in Medicare Resource Costs and Program Spending Per Aged Enrollee, 1991 (In Percent)



Note: Medicare standardized resource costs, resource costs, and program spending are defined in Table 5-1. All three measures are aggregated by the state of patient residence.

SOURCE: ProPAC analysis using data from the Health Care Financing Administration, Office of the Actuary, Bureau of Data Management and Strategy, and Office of Managed Care; and the Departments of Defense and Veterans Affairs.

Program Spending Relative to Resource Costs—Program spending measures the actual payments made to providers by the Medicare program for treating aged beneficiaries. This measure was not designed to be an indicator of the cost of resources used in furnishing patient care, but it has historically been the only financial variable available for state comparison.

Although program spending and (non-standardized) resource costs both reflect the actual input prices and age and sex make up of each state, their relationship differs markedly across the states. There are several reasons for this. First, program spending includes direct payments for graduate medical education, even though these primarily pay for education rather than patient care. Second, Medicare spending does not include payments for services provided to Medicare enrollees in military and VA facilities, since DoD and VA are responsible for this funding. The impact of GME expenses and the use of DoD and VA facilities varies considerably by state (as will be discussed later in this section).

The third factor causing Medicare program spending and resource costs to relate differently by state is that beneficiaries are liable for part of the payments made for their care. This would not matter if beneficiary liability were a uniform proportion of the payments made by the Medicare program, but in fact, the share of spending for which beneficiaries are responsible varies considerably from state to state (also discussed later).

Beneficiary liability includes private insurer payments when the beneficiary is still employed; deductibles and copayments, which can be paid by the beneficiaries themselves, the Medicaid program, or a private insurer; and physician balance billing. The extent of beneficiary liability differs according to the share of the aged population that is working and whether their employers provide group health insurance. It also depends on how much balance billing is practiced by physicians in each locale. Furthermore, out-of-pocket costs are affected by the pattern of service use in each area (greater use of outpatient care will raise the proportion of copayments, for example) and by enrollment status (enrollees in health maintenance organizations pay much less than those in fee for service).[5]

Payment policy decisions are the final factor affecting the relationship between payments and resource costs. In Medicare's prospective payment system (PPS) for hospital inpatient services, the majority of payments were established in relation to expected costs in 1984, the year prospective payment was implemented. But per-case costs in individual hospitals can be substantially higher or lower than payments, and by design the hospitals gain or lose accordingly. A similar phenomenon occurs in the cost-based payment systems used for PPS-excluded hospitals, skilled nursing facilities (SNFs), and home health agencies, where provider-specific limits are applied. When the provider's unit cost is below the limit, payments will be close to costs. For costly providers, however, payments can be much less than costs.

Besides the base payment, additional payments are made to hospitals through the indirect medical education (IME) and disproportionate share (DSH) adjustments. These payments are intended to compensate for financial pressures that have a limited relationship to the cost of treating Medicare patients. When program payments are used for comparison, the states whose hospitals receive the most IME and DSH payments will be higher relative to the national average than they would when a cost measure is used.

South Dakota had the lowest program spending relative to resource costs in 1991, which reflects little medical education activity and its beneficiaries using more services from military and VA facilities than those in any other state. Further, South Dakota has above average beneficiary liability, which is consistent with the almost total absence of Medicare managed care. The highest program spending relative to costs was found in Rhode Island. This reflects low beneficiary payments (because of the widespread presence of managed care) and the second largest amount of medical education, proportionately, among the states (resulting in a greater share of IME and GME payments).

Explaining Variation in Standardized Resource Costs

Many factors that are difficult to measure should nonetheless be considered when evaluating the variation in standardized resource costs across states. This section briefly summarizes demographic, environmental, policy-related, and health system factors that could influence the level of resources devoted to producing health services for the elderly across states.

Health Status and Other Population Characteristics—The health status of a state's residents is probably the most important demographic factor influencing its per capita health care costs. Health status is also one of the hardest to measure. Mortality and morbidity rates, along with other health status indicators that vary substantially across states, can provide some notion of the relative healthiness of a state's population. Comparing standardized resource costs per enrollee with a composite health status variable that combines mortality rates for infants, cervical cancer deaths, colon and rectal cancer deaths, and low birthweight rates provides some indication of the variation in health status by state and its affect on costs (see Table 5-3).

Standardized resource costs per aged Medicare enrollee appear to be highly correlated with health status. Oregon, Hawaii, Utah, Minnesota, Idaho, and Washington in 1991 ranked among the 10 states with lowest standardized resource costs and best health status. Standardized resource costs and health status also were strongly linked for six states with the highest costs—Louisiana, Alabama, Mississippi, Tennessee, Georgia, and Kentucky.

Although the composite health status variable used in this analysis suggests a strong relationship between its components and standardized resource costs per enrollee, many other population characteristics are likely associated with high or low health status as well. These include alcohol and cigarette consumption, education, racial mix, and lifestyle. Cross-state comparisons of standardized resource costs should consider the influence of these and other factors on the relative healthiness of a state's residents.

Some factors, including per capita income and other measures of wealth, may influence both resource costs per enrollee and health status. For example, wealthier individuals generally have better access to health services than those with limited resources. These individuals may use more health care services, which may result in higher health care costs. At the same time, wealth is often positively correlated with education and other factors

Table 5-3. State Rankings for Medicare Standardized Resource Costs Per Aged Enrollee and Health Status

State	Standardized Resource Costs Per Enrollee[a]	Health Status[b]
Oregon	1	4
Hawaii	2	5
Utah	3	1
New Hampshire	4	15
Minnesota	5	3
Idaho	6	9
New Mexico	7	26
Rhode Island	8	24
Washington	9	2
Maine	10	23
Kentucky	41	45
Pennsylvania	42	30
Texas	43	25
Maryland	44	35
Georgia	45	41
Tennessee	46	44
Florida	47	29
Mississippi	48	50
Alabama	49	49
Louisiana	50	46

Note: The state with the lowest cost and best health status is ranked number 1.

[a] Real resource costs are defined in Table 5-1.

[b] Health status is measured as a composite of three age-adjusted mortality rates (infant deaths in 1992, cervical cancer deaths from 1986 to 1990, and colorectal cancer deaths from 1986 to 1990) and the low birthweight rate in 1991.

SOURCE: ProPAC analysis of data from the Health Care Financing Administration, Office of the Actuary, Bureau of Data Management and Strategy, and Office of Managed Care; the Departments of Defense and Veterans Affairs; and Lewin-VHI, Inc., *Health Care Problems: Variation Across States* (Washington, DC: National Institute for Health Care Management, 1994).

that may increase the use of preventive and other health services, resulting in improved health status and lower costs.

The percentage of a state's population in urban or rural areas and other environmental factors may substantially affect its per capita health care costs. Heavily urbanized states may have higher resource costs per resident because of pollution, crime, and other factors associated with poorer health status. Urban providers may have greater production costs due to factors such as high construction or rental expenses, the need for tighter security measures, and higher market wage levels. By contrast, states with a high percentage of rural residents may have relatively lower standardized resource costs per resident due to a combination of lower input prices and limited access to care.

Policy and Health System Factors—Many policy-related factors also affect state-level per capita resource costs. Most states have regulations and licensing requirements that are designed to limit the resources devoted to the production of health services or the prices paid for those services. For example, some states have established certificate of need programs to limit the supply of hospital and nursing home beds and the acquisition of costly technology. Other state regulations and licensing requirements influence the amount of labor used to provide health services. Personnel training standards and minimum staffing requirements are examples. Although these regulations may enhance the quality of the work force, they also may drive up labor costs. Additionally, some states have imposed limits on the rates that hospitals and other providers can charge their patients. Maryland, Connecticut, New York, and Massachusetts are among them.

The structure and efficiency of a state's health care delivery system can significantly affect the resource costs of providing health care to its residents. States that are using inputs most efficiently have relatively lower standardized resource costs per capita. Although efficiency is extremely difficult to assess, some factors are measurable and may provide insight. Managed care plans attempt to reduce costs by moving care to the most efficient setting and by limiting the use and mix of services. To the extent this occurs, states with a high percentage of residents enrolled in managed care plans may have lower resource costs per resident than states with limited managed care enrollment. (This issue is discussed later.)

The mix of physicians, medical specialists, and other health professionals practicing in a state also significantly affects per capita use of health care services.[6] For example, states with more surgical and medical specialists may have higher per capita costs than those where primary care practitioners predominate. Physician practice patterns may also vary among states for a host of reasons. This too may have a major impact on resource costs.

Future Analysis—Many of the factors that influence the variation in resource costs across

states, including health status and per capita income, are difficult for a state's providers and insurers to control. Individual state governments also have little influence over these factors in the short run. There are, however, factors that providers, insurers, and state governments can influence in both the short and long run. This influence on the level of resources devoted to health care services should be considered carefully when comparing costs across states.

ProPAC plans to conduct a multivariate analysis to provide insight into the factors that influence the variation in per capita resource costs across states. Using state-level estimates of many of the demographic, environmental, policy-related, and health system factors discussed above, the Commission will construct a model that will provide estimates of the influence of each factor on Medicare standardized resource costs per aged enrollee. The model will include health status indicators, physician and hospital supply measures, and socioeconomic conditions. The results may be particularly helpful for public and private policy makers in considering the use of capitated rates for health services and adjusting those rates to reflect justifiable differences in costs across states.

Table 5-4. Health Care Settings Used in the Analysis of Medicare Costs and Payments Per Enrollee

Hospital Inpatient—Includes services provided by PPS hospitals as well as psychiatric, rehabilitation, and long-term hospitals and distinct-part units. Also included under this setting are physician services provided during inpatient stays.

Post-Acute Care—Includes services provided by skilled nursing facilities, home health agencies (both free-standing and hospital-based), and hospices, as well as physician services provided in the skilled nursing facility and home health agency settings.

Ambulatory Care—Includes primary care services provided in hospital outpatient departments, free-standing centers (migrant health centers, imaging centers, ambulatory surgical centers, dialysis facilities, and so forth), and physician offices, as well as ancillary services ordered by a practitioner in any of these settings. Also included under this setting are physician services provided in outpatient departments and free-standing centers.

Other Services—Includes all other Medicare-covered care, primarily services provided by practitioners other than physicians in an office setting (such as nurse practitioners, psychologists, and physical therapists), ambulance services, and durable medical equipment.

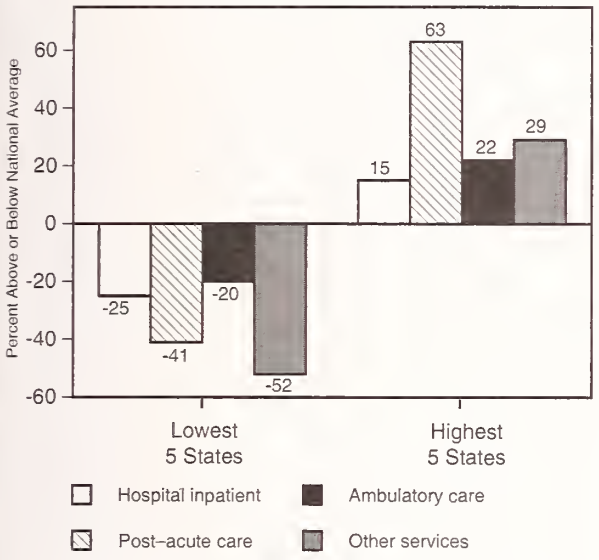
Standardized Resource Costs Per Enrollee by Setting

The services covered by Medicare can be meaningfully divided into four broad categories of settings: hospital inpatient, post-acute care, ambulatory care, and all other. (These settings are defined in Table 5-4.) When physician costs are allocated to the setting in which they were incurred, inpatient services made up 63 percent of total costs per enrollee nationally in 1991; post-acute care was responsible for 9 percent; ambulatory care, 26 percent; and all other services, 2 percent.

Inpatient services varied the least in standardized costs per enrollee, but the five highest states were still over 50 percent more costly than the five lowest (see Figure 5-2). The lowest inpatient costs were $1,867 per enrollee in Utah, while Louisiana's were highest at $3,299 (see Table 5-5). Costs for ambulatory care, which includes services provided in hospital outpatient departments, free-standing centers, physician offices, and dialysis facilities, differed a similar amount between the highest and lowest five states. For all states, costs ranged from a low of $865 in Minnesota to a high of $1,412 in Florida.

The largest variation was in post-acute services, which are provided by skilled nursing facilities, home health agencies, and hospices. The five lowest states were 41 percent below average, led by New Jersey at $212 per enrollee, while the five highest were 63 percent above average, topped by Tennessee at $738. This extreme variation—with Tennessee's costs more than three times New Jersey's—results mostly from differences in patient management practices and availability of providers among the states, but may also be due to differences in Medicaid and Medicare payment policies. Some state Medicaid programs had relatively high SNF and home health payment rates in 1991, which could have led to services being inappropriately paid for by Medicaid rather than Medicare. In other states, Medicare payment rates were more attractive relative to those offered by the Medicaid program (and to some extent in the private sector), making it more likely that payments were made by

Figure 5-2. Range of State-Level Variation in Medicare Standardized Resource Costs Per Aged Enrollee, by Setting, 1991 (In Percent)



Note: Medicare standardized resource costs are defined in Table 5-1.

SOURCE: ProPAC analysis using data from the Health Care Financing Administration, Office of the Actuary, Bureau of Data Management and Strategy, and Office of Managed Care; and the Departments of Defense and Veterans Affairs.

the Medicare program for its beneficiaries. The extent of inappropriate payer assignment is not known.

The per-enrollee cost of other services, which include ambulance, durable medical equipment, and non-physician practitioners, also varied much more than the cost of inpatient and ambulatory care services. The five lowest states fell 52 percent below the national average, with Hawaii's $24 per enrollee by far the lowest. At the high end, five states were 29 percent above average, topped by Pennsylvania at $137.

Generally, states with relatively high total health care costs had high costs across all settings and vice versa. This pattern shows most clearly at the extremes: Hawaii ranked no lower than sixth in any category, while Louisiana never rose above forty-eighth. There were a number of prominent exceptions, however. Post-acute costs in Alaska, New Jersey, and South Dakota were much lower, relatively, than costs for inpatient services or ambulatory care. This could indicate constrained capacity, particularly for SNF beds, or simply that physicians in these states are not accustomed to using post-acute services in some clinical situations. Idaho, Utah, and Minnesota, conversely, had much higher post-acute care costs relative to their ranking in the other categories. This is consistent with managed care incentives, and managed care is prominent in the latter two states. Similarly, in two other states where managed care is widespread, Arizona and Washington, inpatient costs were low relative to other costs. Finally, Tennessee, Mississippi, and Illinois were all high-cost states with low ambulatory care costs. This may be caused by restricted access to primary care services, which can lead to greater use of more expensive facility-based services, or simply by different practice patterns.

The Contribution of Volume and Cost Per Unit

The overall cost per enrollee for any type of care is determined by the number of services each enrollee uses and the average cost of the service units. ProPAC has developed new measures to show the relative contributions of volume and cost per unit to state variation in Medicare standardized resource costs per aged enrollee. (See Table 5-1 for measure definitions.) Due to data constraints, however, these measures could be applied only to three facility-based settings—hospital inpatient, SNF, and home health. Volume was measured as inpatient admissions, SNF patient days, and home health visits per enrollee, respectively, with an adjustment for beneficiary age and sex.[7] Costs per unit and per enrollee were calculated using standardized resource costs.

The Commission has developed another method to isolate the use of services from costliness, which can be applied not only in the inpatient, SNF, and home health settings, but also in ambulatory care settings where there is no reliable measure of output. This was done by valuing all services at national average payment rates. With payment rates held constant, all variation in the resulting adjusted payments per enrollee variable (among states or any other groupings of interest) must be due to utilization. However, utilization is broadly defined in this context to include both the number and intensity of services, while the volume indicator presented earlier measures only the number of service units.[8] The aggregate utilization measure is presented in index form; that is, each state's value relative to the national average is shown.

Table 5-5. Medicare Standardized Resource Costs Per Aged Enrollee, by Setting and State, 1991

State	Hospital Inpatient		Post-Acute Care		Ambulatory Care		Other	
	Rank	Costs	Rank	Costs	Rank	Costs	Rank	Costs
National average	—	$2,742	—	$378	—	$1,117	—	$101
Alabama	49	3,216	46	530	39	1,120	44	115
Alaska	18	2,576	3	222	33	1,090	15	73
Arizona	10	2,341	32	380	49	1,401	30	89
Arkansas	41	2,974	31	377	28	1,047	39	108
California	15	2,493	42	416	47	1,342	40	111
Colorado	14	2,491	41	414	22	1,025	14	73
Connecticut	21	2,627	33	384	15	998	43	113
Delaware	27	2,721	23	326	32	1,080	46	125
Florida	29	2,740	44	461	50	1,412	45	122
Georgia	43	2,994	43	448	42	1,155	37	106
Hawaii	3	2,134	4	228	6	931	1	24
Idaho	5	2,186	26	337	19	1,006	6	61
Illinois	47	3,092	36	388	8	969	27	87
Indiana	33	2,799	35	387	27	1,033	5	59
Iowa	17	2,552	6	247	36	1,099	16	77
Kansas	25	2,646	16	309	41	1,149	29	89
Kentucky	46	3,061	38	396	25	1,027	33	93
Louisiana	50	3,299	48	582	48	1,399	48	132
Maine	12	2,454	7	249	4	917	34	98
Maryland	45	3,034	10	282	46	1,278	35	104
Massachusetts	26	2,707	34	386	30	1,055	49	133
Michigan	22	2,630	18	315	45	1,202	47	127
Minnesota	6	2,253	21	320	1	865	4	54
Mississippi	42	2,989	49	697	10	979	25	85
Missouri	34	2,847	45	471	20	1,013	23	81
Montana	19	2,612	29	351	29	1,055	3	53
Nebraska	11	2,397	12	287	14	988	7	62
Nevada	35	2,850	40	408	44	1,190	17	77
New Hampshire	8	2,293	5	240	3	895	8	62
New Jersey	30	2,744	1	212	18	1,005	32	91
New Mexico	9	2,301	8	273	16	999	22	78
New York	24	2,640	19	316	17	1,000	41	113
North Carolina	20	2,626	27	343	21	1,022	18	78
North Dakota	23	2,639	22	325	31	1,061	19	78
Ohio	36	2,856	24	329	34	1,099	36	105
Oklahoma	32	2,783	30	357	26	1,028	28	87
Oregon	2	1,950	17	313	12	985	10	66
Pennsylvania	40	2,966	37	392	37	1,099	50	137
Rhode Island	7	2,265	20	318	11	983	42	113
South Carolina	28	2,736	13	287	24	1,027	26	86
South Dakota	37	2,916	2	219	23	1,026	13	72
Tennessee	38	2,920	50	738	7	966	24	83
Texas	44	3,003	39	397	40	1,136	38	107
Utah	1	1,867	47	536	9	975	11	66
Vermont	13	2,489	25	337	5	919	2	49
Virginia	39	2,946	11	283	38	1,104	20	78
Washington	4	2,168	28	348	35	1,099	31	89
West Virginia	48	3,157	15	307	13	985	21	78
Wisconsin	16	2,536	9	275	2	879	12	68
Wyoming	31	2,763	14	304	43	1,163	9	63

Note: Standardized resource costs are defined in Table 5-1, and the inpatient, post-acute, ambulatory, and other settings are defined in Table 5-4. The state with the lowest costs is ranked number 1.

SOURCE: ProPAC analysis using data from the Health Care Financing Administration, Office of the Actuary, Bureau of Data Management and Strategy, and Office of Managed Care; and the Departments of Defense and Veterans Affairs.

Volume and Cost Per Unit in Facility-Based Settings—In the hospital inpatient setting, eight of the 10 states with the lowest overall costs per enrollee in 1991 also were among those with the lowest admissions per enrollee (see Table 5-6). With just one exception, the 10 states with the highest overall costs also had high admission rates. This pattern strongly suggests that the volume of services delivered drives costs. However, there were two prominent exceptions—Minnesota and Rhode Island. Since these states have high Medicare managed care enrollments, it is not surprising that they were found to be among the least costly for inpatient services. But in both cases, low inpatient costs were achieved by controlling cost per admission, which may be linked to shorter than average lengths of stay. This was just the opposite of the experience in Hawaii, which also has high Medicare managed care penetration. Hawaii had the lowest admission rate in the country (in fact, 13 percent lower than any other state), but the second highest per admission costs. With admissions limited to this extent, the patients who are admitted probably have complex medical conditions and therefore are costly to treat.

In the SNF setting, overall costs per enrollee were fairly closely linked with volume of patient days in all of the 10 highest and 10 lowest cost states (see Table 5-7). Minnesota was again notable in that it had 50 percent more patient days per enrollee than any other state. This unusually high rate of SNF use, coupled with low hospital inpatient costs per admission as seen earlier, suggests that SNF services are being used to substitute for the last days of inpatient stays.

The home health sector offers the clearest example of volume driving costs per enrollee. In the four states with the highest home health costs per enrollee—Mississippi, Tennessee, Louisiana, and Alabama—the number of visits per enrollee ranged from 230 percent to more than 350 percent of the national average (see Table 5-8). These use rates

Table 5-6. Hospital Inpatient Services: Contribution of Volume and Cost Per Unit to Medicare Standardized Resource Costs Per Aged Enrollee, 1991

State	Cost Per Enrollee		Admissions Per Enrollee		Cost Per Admission	
	Rank	Cost	Rank	Cases	Rank	Cost
Utah	1	$1,867	2	0.24	13	$ 7,250
Oregon	2	1,950	3	0.26	5	7,016
Hawaii	3	2,134	1	0.21	49	10,301
Washington	4	2,168	4	0.27	22	7,471
Idaho	5	2,186	5	0.27	9	7,153
Minnesota	6	2,253	34	0.34	2	6,749
Rhode Island	7	2,265	25	0.32	4	6,947
New Hampshire	8	2,293	11	0.28	25	7,601
New Mexico	9	2,301	13	0.30	7	7,091
Arizona	10	2,341	10	0.28	32	7,937
National average	—	2,742	—	0.33	—	7,988
Arkansas	41	2,974	45	0.38	3	6,938
Mississippi	42	2,989	49	0.41	1	6,730
Georgia	43	2,994	43	0.38	18	7,393
Texas	44	3,003	26	0.32	43	8,559
Maryland	45	3,034	39	0.35	34	8,031
Kentucky	46	3,061	46	0.39	17	7,349
Illinois	47	3,092	40	0.35	37	8,165
West Virginia	48	3,157	50	0.43	21	7,469
Alabama	49	3,216	48	0.40	24	7,600
Louisiana	50	3,299	47	0.40	30	7,877

Note: Volume (in this case, number of admissions) per enrollee and cost per unit of service are defined in Table 5-1. The state with the lowest cost or volume is ranked number 1.

SOURCE: ProPAC analysis using data from the Health Care Financing Administration, Office of the Actuary, Bureau of Data Management and Strategy, and Office of Managed Care; and the Departments of Defense and Veterans Affairs.

Table 5-7. Skilled Nursing Facility Services: Contribution of Volume and Cost Per Unit to Medicare Standardized Resource Costs Per Aged Enrollee, 1991

State	Cost Per Enrollee		Patient Days Per Enrollee		Cost Per Patient Day	
	Rank	Cost	Rank	Patient Days	Rank	Cost
Maine	1	$ 64	1	0.16	46	$276
New Hampshire	2	85	2	0.26	34	229
New Jersey	3	90	3	0.28	26	206
Vermont	4	95	5	0.34	19	192
Oklahoma	5	110	4	0.31	47	288
Virginia	6	113	10	0.40	21	197
South Carolina	7	113	13	0.44	25	200
Alaska	8	115	7	0.39	49	316
Maryland	9	124	12	0.41	28	219
New Mexico	10	126	6	0.38	43	258
National average	—	172	—	0.65	—	207
Connecticut	41	198	33	0.67	8	173
Illinois	42	200	40	0.76	29	222
Arizona	43	207	39	0.74	42	253
North Dakota	44	207	35	0.69	22	198
Utah	45	216	41	0.77	36	233
Colorado	46	222	45	0.85	33	228
Minnesota	47	224	50	1.44	1	133
California	48	232	47	0.87	38	245
Indiana	49	242	48	0.90	18	192
Missouri	50	251	46	0.85	37	240

Note: Volume (in this case, number of patient days) per enrollee and cost per unit of service are defined in Table 5-1. The state with the lowest cost or volume is ranked number 1.

SOURCE: ProPAC analysis using data from the Health Care Financing Administration, Office of the Actuary, Bureau of Data Management and Strategy, and Office of Managed Care; and the Departments of Defense and Veterans Affairs.

are so high that they were not offset even by costs per visit among the lowest in the nation.

Utilization Across All Settings—ProPAC's utilization index produces results that are consistent with the findings for volume and cost per unit in the inpatient, SNF, and home health settings. How states ranked on overall standardized resource costs per enrollee generally mirrored their rank on the utilization measure, supporting the premise that costs are driven primarily by volume of services (see Table 5-9). However, Alaska and Vermont, two of the lowest utilization states, are modest exceptions. They ranked second and fifth lowest, respectively, on utilization, but only fourteenth and thirteenth in terms of standardized resource costs. This suggests that their per unit costs were higher relative to other states than their utilization.

Hawaii had by far the lowest utilization across all services—only 65 percent of the national average, compared with the second lowest state, Alaska (82 percent) and third place Oregon (83 percent). But Hawaii's unit costs tend to be high (recall that it ranked second highest on inpatient cost per admission), which caused its overall standardized costs per enrollee to be slightly above Oregon's. Louisiana had by far the highest utilization—24 percent above the national average compared with second highest Alabama, which was only 15 percent above average. The difference in per person use of services between Hawaii and Louisiana was 91 percent; that is, the average Louisiana resident used almost twice the volume of services as the average person in Hawaii. But this was mitigated somewhat by the contribution of cost per unit of service, such that the difference in overall standardized resource costs per enrollee was only 63 percent.

The same pattern applies to the five other southern states noted earlier as having the highest standardized resource costs per enrollee. On average, utilization of services in these states was 13 percent above the national average, while their standardized resource costs were only 10 percent above average. From this it

Table 5-8. Home Health Care: Contribution of Volume and Cost Per Unit to Medicare Standardized Resource Costs Per Aged Enrollee, 1991

State	Cost Per Enrollee		Visits Per Enrollee		Cost Per Visit	
	Rank	Cost	Rank	Visits	Rank	Cost
South Dakota	1	$ 55	1	0.23	40	$ 75
Minnesota	2	79	4	0.36	22	62
Iowa	3	81	5	0.43	19	59
Hawaii	4	85	2	0.23	49	98
Wisconsin	5	87	8	0.48	21	61
Nebraska	6	96	6	0.46	23	62
Kansas	7	104	10	0.52	27	65
Alaska	8	106	3	0.35	50	104
New Jersey	9	106	14	0.55	29	65
North Dakota	10	106	7	0.46	37	71
National average	—	189	—	1.05	—	61
Arkansas	41	225	41	1.33	13	56
Vermont	42	232	43	1.51	10	53
Oklahoma	43	236	39	1.26	20	60
Florida	44	275	45	1.76	12	55
Georgia	45	297	46	2.09	3	49
Utah	46	318	44	1.55	33	67
Alabama	47	362	48	2.41	2	47
Louisiana	48	384	47	2.41	6	52
Tennessee	49	553	50	3.74	9	52
Mississippi	50	563	49	3.71	5	50

Note: Volume (in this case, number of visits) per enrollee and cost per unit of service are defined in Table 5-1. The state with the lowest cost or volume is ranked number 1.

SOURCE: ProPAC analysis using data from the Health Care Financing Administration, Office of the Actuary, Bureau of Data Management and Strategy, and Office of Managed Care; and the Departments of Defense and Veterans Affairs.

can be deduced that their costs per unit of service were below average—even after adjusting for the below average input prices found throughout the South. This is consistent with the finding noted earlier that the states with the highest standardized resource costs per enrollee generally had the unhealthiest populations by one measure of this parameter. Poor health status would be expected to lead to greater use of services. However, it is also possible that the low cost of services in southern states, brought about by the low prices for labor and other goods and services available to their providers, has raised the demand for health care relative to a given level of real need. And the converse situation could be exhibited by Hawaii—unusually high unit costs driven by high input prices helping to brake the demand for health care.

Variation in Factors Affecting Standardized Resource Cost Measurement

As explained earlier, several factors play a key role in calculating resource costs per enrollee by state or in standardizing this measure. State-level differences in each of these variables are discussed below. The first measurement issue is patient migration across states, which can affect any measure of per person costs or payments for a state's residents. This is followed by the contribution of GME payments to total Medicare payments. Next, a breakdown of financial responsibility for the costs of treating aged Medicare beneficiaries is presented. Finally, the variation in resource costs due to input prices and beneficiary age and sex is shown.

Patient Migration—All cost and payment data presented in this chapter were aggregated according to the patient's state of residence, so that the values shown represent an average for those living in each state. This approach can differ substantially from aggregation based on the location of providers (the approach used in most commonly available data) because many patients travel to other states for their care. This includes crossing state borders to use providers that are within the same market area, as well as obtaining services in other states

Table 5-9. Medicare Utilization Index for Aged Enrollees, by State, 1991

State	Utilization Index					Standardized Resource Costs Per Enrollee, All Services (Rank)
	All Services		Hospital Inpatient	Post-Acute Care	Ambulatory Care	
	Rank	Index				
Hawaii	1	0.65	0.63	0.50	0.80	2
Alaska	2	0.82	0.84	0.54	0.87	14
Oregon	3	0.83	0.80	0.83	0.90	1
New Hampshire	4	0.84	0.86	0.72	0.87	4
Vermont	5	0.85	0.87	0.90	0.82	13
Utah	6	0.85	0.77	1.28	0.92	3
Maine	7	0.86	0.88	0.69	0.85	10
Minnesota	8	0.86	0.89	0.81	0.83	5
New Mexico	9	0.87	0.90	0.71	0.87	7
Nebraska	10	0.87	0.89	0.71	0.93	11
Wisconsin	11	0.88	0.94	0.72	0.81	12
Idaho	12	0.89	0.87	0.81	0.97	6
Connecticut	13	0.90	0.86	1.08	0.90	22
Washington	14	0.90	0.87	0.88	1.00	9
New York	15	0.91	0.94	0.75	0.89	19
Nevada	16	0.92	0.91	0.91	0.94	38
Rhode Island	17	0.92	0.91	0.93	0.93	8
South Carolina	18	0.94	0.94	0.87	0.97	23
Iowa	19	0.94	0.97	0.58	1.02	15
North Dakota	20	0.95	0.99	0.74	0.94	21
New Jersey	21	0.95	1.00	0.55	0.94	17
Delaware	22	0.95	0.94	0.83	0.98	27
Colorado	23	0.95	0.93	1.08	0.99	16
North Carolina	24	0.96	0.95	1.03	0.96	18
Montana	25	0.96	1.00	0.89	0.94	20
Wyoming	26	0.97	0.98	0.72	1.04	32
Kansas	27	0.97	0.99	0.71	1.02	24
Indiana	28	0.98	1.00	1.02	0.93	30
California	29	0.98	0.92	1.03	1.12	33
Ohio	30	0.99	1.01	0.82	0.99	34
Virginia	31	0.99	1.03	0.75	1.01	35
South Dakota	32	0.99	1.09	0.55	0.93	26
Arizona	33	0.99	0.92	0.94	1.20	25
Massachusetts	34	1.00	1.00	1.09	0.94	31
West Virginia	35	1.00	1.11	0.75	0.87	39
Michigan	36	1.01	0.95	0.88	1.16	29
Oklahoma	37	1.01	1.07	0.92	0.93	28
Illinois	38	1.02	1.10	0.96	0.87	40
Missouri	39	1.02	1.05	1.15	0.94	36
Pennsylvania	40	1.05	1.09	1.00	0.96	42
Maryland	41	1.06	1.09	0.75	1.10	44
Kentucky	42	1.07	1.13	1.10	0.93	41
Texas	43	1.07	1.08	1.09	1.03	43
Florida	44	1.08	0.99	1.34	1.22	47
Arkansas	45	1.10	1.17	1.03	0.95	37
Georgia	46	1.12	1.13	1.37	1.04	45
Mississippi	47	1.13	1.14	1.82	0.93	48
Tennessee	48	1.14	1.10	2.30	0.90	46
Alabama	49	1.15	1.17	1.48	1.02	49
Louisiana	50	1.24	1.20	1.56	1.23	50

Note: The utilization index is defined in Table 5-1, and the hospital inpatient, post-acute care, and ambulatory care settings are defined in Table 5-4. The state with the lowest utilization is ranked number 1.

SOURCE: ProPAC analysis using data from the Health Care Financing Administration, Office of the Actuary, Bureau of Data Management and Strategy, and Office of Managed Care; and the Departments of Defense and Veterans Affairs.

during business or vacation trips or while staying somewhere for the season.

For all Medicare-covered services, the greatest net inflow of patients from other states in 1991 was in North Dakota, which has numerous providers located along its borders serving people from rural areas in contiguous states (see Table 5-10). Care provided to patients from other states accounted for 14.5 percent of the care delivered by the state's providers. Minnesota was second with a net inflow of 11.6 percent, resulting from the Mayo Clinic serving patients from many states as well as from any facilities that may draw patients from immediately across its borders. At the other extreme, the net outflow of patients in Wyoming was 25.2 percent.

Previously, the only available information on state-level patient migration was based on 1982 hospital data.[9] The extent of migration for hospital care increased over the decade between measurements, and migration for other services in 1991 was almost as extensive as for services provided by hospitals.[10]

Graduate Medical Education—As noted earlier, GME expenses were excluded from the definition of resource costs because medical education is viewed as contributing more to education than to patient care. However, GME payments are included in Medicare program spending, and this contributes to the different relationship between payments and resource costs among the states.

On average, graduate medical education was responsible for 1.8 percent of Medicare program spending in 1991 (see Table 5-11). New York's share was largest at 3.5 percent, followed by the

Table 5-10. Patient Migration Across State Lines for All Medicare-Covered Services, by State, 1991 (In Percent)

State	Net Inflow of Patients	State	Net Inflow of Patients
National average	0.0%	Kentucky	-1.4%
		New York	-1.7
North Dakota	14.5	Alabama	-2.1
Minnesota	11.6	Rhode Island	-2.1
Tennessee	9.5	Wisconsin	-2.6
Missouri	6.3	Virginia	-2.8
Nevada	5.2	Michigan	-3.1
Utah	5.1	Arkansas	-3.8
Arizona	4.7	Maryland	-3.9
Pennsylvania	3.4	New Hampshire	-4.4
Colorado	3.3	Montana	-4.5
North Carolina	3.1	Illinois	-4.6
Massachusetts	3.1	New Jersey	-4.6
Nebraska	2.1	West Virginia	-4.7
Texas	1.9	Maine	-4.8
Florida	1.9	Delaware	-5.7
Hawaii	1.6	Kansas	-7.3
Oregon	1.1	Vermont	-7.6
Georgia	0.9	Iowa	-7.8
California	0.9	Oklahoma	-8.0
Washington	0.6	South Carolina	-8.5
Louisiana	0.3	New Mexico	-8.7
Connecticut	-0.1	Mississippi	-9.1
Indiana	-0.1	Alaska	-14.3
South Dakota	-0.2	Idaho	-17.6
Ohio	-0.7	Wyoming	-25.2

Note: Values shown are the percentage by which Medicare program payments made to providers located in the state exceed payments for beneficiaries living in the state. A positive value means that more care was provided to people coming into the state than was obtained by residents traveling to another state.

SOURCE: ProPAC analysis using data from the Health Care Financing Administration, Office of the Actuary and Bureau of Data Management and Strategy.

Table 5-11. Graduate Medical Education Payments as a Percentage of Total Medicare Program Payments, by State, 1991

State	Percentage of Program Payments	State	Percentage of Program Payments
National average	1.8%	Arkansas	1.4%
		Wisconsin	1.4
New York	3.5	Georgia	1.4
Rhode Island	3.2	Minnesota	1.3
Massachusetts	2.9	Louisiana	1.3
New Jersey	2.8	New Hampshire	1.2
Delaware	2.7	Indiana	1.2
Pennsylvania	2.7	Arizona	1.1
Michigan	2.7	Oregon	1.1
Connecticut	2.6	Texas	1.1
Illinois	2.6	Oklahoma	1.0
Maryland	2.2	Mississippi	0.9
Ohio	2.1	Kentucky	0.9
Iowa	2.1	Utah	0.9
Virginia	2.1	Washington	0.9
North Carolina	2.1	South Dakota	0.8
Missouri	2.0	California	0.8
Tennessee	1.9	Florida	0.7
Vermont	1.8	Hawaii	0.7
Colorado	1.7	North Dakota	0.7
Nebraska	1.6	New Mexico	0.6
South Carolina	1.6	Nevada	0.6
West Virginia	1.5	Wyoming	0.5
Maine	1.4	Alaska	0.5
Alabama	1.4	Idaho	0.5
Kansas	1.4	Montana	0.4

Note: Payments for graduate medical education are made only in the hospital inpatient and outpatient settings, but the value shown is these payments as a percentage of program payments in all settings.

SOURCE: ProPAC analysis using data from the Health Care Financing Administration, Office of the Actuary and Bureau of Data Management and Strategy.

shares in several neighboring Atlantic seaboard states—Rhode Island, Massachusetts, New Jersey, and Delaware. The smallest proportion of payments attributable to GME was 0.4 percent in Montana, and the next seven lowest states were also located in the West.

Financial Responsibility of Beneficiaries and the DoD and VA—Resource costs were defined to include the expenses associated with beneficiary liability and an estimate of what services obtained in military and VA facilities would have cost had they been delivered by non-Federal providers.[11] Nationally, the breakdown for shares of the total resource cost of treating aged Medicare beneficiaries in 1991 was 81.5 percent for the Medicare program, 15.5 percent for beneficiaries, and 3.1 percent for the Departments of Defense and Veterans Affairs (see Table 5-12). Because these shares differ by state, the inclusion of costs attributable to beneficiaries and the DoD and VA in resource costs contributes to a markedly different pattern of state variation compared with the variation in program payments.

The Medicare program's largest share is about 84 percent in both Massachusetts and California, followed by several other eastern states—Rhode Island, Florida, Pennsylvania, and New York. One factor most of these states have in common is receiving proportionately more revenue from the IME and DSH adjustments.

The five states with the smallest beneficiary shares include three that have correspondingly high shares for the Medicare program (California, Massachusetts, and New York), as well as Colorado and Maryland. Colorado exemplifies another important

Table 5-12. Share of Medicare Standardized Resource Costs Per Aged Enrollee, by Financial Responsibility for Services and State, 1991

Medicare Program		Medicare Beneficiaries		Departments of Defense and Veterans Affairs	
State	Percent	State	Percent	State	Percent
National average	81.5%	National average	15.5%	National average	3.1%
Massachusetts	84.1	South Carolina	18.6	South Dakota	7.4
California	83.9	Idaho	18.6	New Mexico	5.8
Rhode Island	83.1	North Dakota	18.4	Colorado	5.7
Florida	82.8	Montana	18.3	Wyoming	5.5
Pennsylvania	82.8	Nebraska	18.3	Arkansas	5.4
New York	82.6	South Dakota	18.3	Idaho	5.3
Connecticut	82.4	Wyoming	17.8	Virginia	5.0
Michigan	82.3	Iowa	17.8	Vermont	4.9
Maryland	82.2	North Carolina	17.6	South Carolina	4.9
New Jersey	82.0	Wisconsin	17.0	Texas	4.7
Maine	82.0	Virginia	17.0	Utah	4.7
Ohio	81.7	Delaware	16.9	New Hampshire	4.7
Louisiana	81.7	Kansas	16.8	Nebraska	4.7
Indiana	81.5	Utah	16.8	Arizona	4.6
Tennessee	81.4	New Jersey	16.8	Alaska	4.6
Illinois	81.3	Georgia	16.6	Mississippi	4.5
Alabama	81.3	Missouri	16.5	Washington	4.4
Nevada	81.0	Michigan	16.4	Minnesota	4.4
Hawaii	80.9	Ohio	16.4	Montana	4.2
West Virginia	80.9	Alabama	16.3	Oregon	4.1
Oklahoma	80.7	Indiana	16.3	West Virginia	4.0
Alaska	80.6	Kentucky	16.1	Iowa	3.9
Wisconsin	80.6	Maine	16.0	Kentucky	3.8
Minnesota	80.5	Illinois	15.9	Maryland	3.6
Delaware	80.5	New Hampshire	15.8	Oklahoma	3.5
Mississippi	80.5	Oklahoma	15.8	Hawaii	3.5
Oregon	80.4	Nevada	15.8	Missouri	3.4
Georgia	80.3	Connecticut	15.7	Nevada	3.3
Washington	80.3	Pennsylvania	15.7	Georgia	3.1
Kentucky	80.1	Tennessee	15.7	Kansas	3.0
Kansas	80.1	Texas	15.7	North Carolina	3.0
Missouri	80.1	Hawaii	15.6	Tennessee	2.9
Arizona	80.1	Vermont	15.6	New York	2.9
Colorado	80.0	Louisiana	15.5	Illinois	2.8
Texas	79.6	Arkansas	15.5	Louisiana	2.8
New Hampshire	79.6	Oregon	15.4	California	2.7
Vermont	79.5	Florida	15.4	Delaware	2.6
North Carolina	79.4	Arizona	15.3	North Dakota	2.5
North Dakota	79.2	Washington	15.3	Wisconsin	2.4
Arkansas	79.1	New Mexico	15.2	Alabama	2.4
New Mexico	79.0	West Virginia	15.1	Rhode Island	2.3
Utah	78.6	Minnesota	15.1	Massachusetts	2.3
Iowa	78.3	Mississippi	15.0	Indiana	2.2
Virginia	78.0	Alaska	14.8	Maine	1.9
Montana	77.5	Rhode Island	14.5	Ohio	1.9
Nebraska	77.0	New York	14.5	Florida	1.9
Wyoming	76.7	Colorado	14.3	Connecticut	1.8
South Carolina	76.4	Maryland	14.2	Pennsylvania	1.5
Idaho	76.2	Massachusetts	13.5	Michigan	1.3
South Dakota	74.3	California	13.4	New Jersey	1.2

SOURCE: ProPAC analysis using data from the Health Care Financing Administration, Office of the Actuary, Bureau of Data Management and Strategy, and Office of Managed Care; and the Departments of Defense and Veterans Affairs.

characteristic: high Medicare managed care enrollment. Managed care beneficiaries generally have much lower out-of-pocket costs than those using the fee-for-service system, as noted earlier. Maryland is a special case due to its all-payer rate-setting system.

All five states with the smallest program payment shares—South Dakota (the lowest at 74.3 percent), Idaho, South Carolina, Wyoming, and Nebraska—also had among the largest beneficiary shares. These states receive little revenue from IME and DSH payments and have small health maintenance organization (HMO) enrollments.

The DoD and VA shares tend to follow the location of VA hospitals most closely, since the VA system provides about four times as much care to the elderly as the military system. For example, the largest share was 7.4 percent in South Dakota, which has three VA facilities and an Air Force hospital serving a relatively small elderly population. The next largest shares were found in New Mexico, Colorado, Wyoming, Arkansas, and Idaho—all predominately rural states where Federal facilities may play an important role in ensuring access to care. The states with the smallest proportionate use of Federal facilities, including New Jersey (the lowest at 1.2 percent), Michigan, Pennsylvania, and Connecticut, are all more urbanized; their residents may have a greater selection of private sector facilities within easy reach.

Input Prices and Beneficiary Age and Sex—The relative prices providers pay for the goods and services they buy and the age and sex composition of their beneficiary population are regarded as two of the most important sources of geographic variation in resource costs. Because the health system has little influence over these factors, they were controlled for in creating the standardized resource cost variable.

The highest input prices in 1991 were seen in Alaska, California, and Hawaii in the West and several East Coast states—Connecticut, New Jersey, New York, and Massachusetts (see Table 5-13). These states' costs were boosted between 7 percent and 15 percent by the influence of prices. As discussed earlier, adjusting for these effects resulted in substantial changes in relative costliness before and after standardization. The lowest input prices were found in southern and Plains states. Mississippi's costs were 20 percent lower than they would have been with national average prices, an effect that was five percentage points greater than in any of its neighboring states.

The states with the costliest elderly populations in terms of age and sex—with costliest primarily implying the oldest—are all in the Midwest and Plains regions. North Dakota's large share of such beneficiaries, for example, drove up its costs by 3.2 percent, and costs in Nebraska, South Dakota, Minnesota, Iowa, and Kansas were at least 2.0 percent higher because of this factor. By contrast, relatively young populations in Alaska and Nevada resulted in costs that were, respectively, 4.3 percent and 4.2 percent lower than they would have been with an average beneficiary composition—almost twice the downward effect of any other state.

The effect of high input prices was over three percentage points greater in Alaska than in any other state, but this gap was offset by its also having the least costly age and sex composition. North Dakota exhibited the opposite pattern—among the lowest input prices offset partly by the most costly beneficiary population.

STATE VARIATION IN HOSPITAL PAYMENTS

Hospital payments relative to costs vary substantially by payer. Since the mid-1980s, hospitals have compensated for growing losses from Medicare, Medicaid, and uncompensated care by charging private insurers rates that are higher than their costs, or cost shifting. The degree to which hospitals obtain extra revenues from private payers is based on many factors. Among these are the ability of hospitals to constrain costs, variation in Medicare and Medicaid payments relative to costs, differences in state and local government subsidies, private payers' share of payments and costs, and the ability of private payers to negotiate competitive payment rates. These factors may vary markedly by state, because of differences in the structure of the state's health care delivery and financing system, economic conditions, demographics, and local policy decisions.

Variation in Medicare and Medicaid Payments

Using 1993 American Hospital Association Annual Survey data, ProPAC calculated payment to

Table 5-13. Effects of Input Prices and Beneficiary Age and Sex on Medicare Costs Per Aged Enrollee, by State, 1991 (In Percent)

Input Prices[a]		Age and Sex[b]	
State	Percent	State	Percent
National average	0.0%	National average	0.0%
Alaska	14.7	North Dakota	3.2
Connecticut	11.3	Nebraska	2.5
California	11.2	South Dakota	2.5
Hawaii	10.7	Minnesota	2.2
New Jersey	10.1	Iowa	2.0
New York	9.3	Kansas	2.0
Massachusetts	7.4	Wisconsin	1.4
Rhode Island	5.4	Missouri	1.3
Nevada	5.1	Mississippi	1.1
New Hampshire	4.6	Oklahoma	0.9
Michigan	3.2	Arkansas	0.9
Washington	1.5	Massachusetts	0.8
Delaware	1.1	Vermont	0.7
Maryland	1.1	Montana	0.7
Florida	0.7	New York	0.7
Arizona	0.1	Maine	0.6
Pennsylvania	-0.4	Idaho	0.4
Illinois	-1.1	Florida	0.4
Colorado	-1.3	Oregon	0.4
Oregon	-2.1	Illinois	0.4
Minnesota	-2.1	Connecticut	0.4
Ohio	-3.1	New Hampshire	0.2
Utah	-3.2	Rhode Island	0.1
Texas	-3.8	Louisiana	0.1
Georgia	-5.4	Kentucky	0.0
Wisconsin	-5.5	Washington	0.0
Maine	-5.7	Alabama	-0.1
Indiana	-5.9	Wyoming	-0.2
New Mexico	-6.1	Indiana	-0.2
North Carolina	-6.6	West Virginia	-0.2
Virginia	-6.7	Tennessee	-0.3
Missouri	-7.0	California	-0.3
Louisiana	-7.0	Texas	-0.4
Idaho	-7.5	New Mexico	-0.4
Vermont	-7.8	Utah	-0.5
Tennessee	-8.0	Colorado	-0.5
South Carolina	-8.4	Pennsylvania	-0.5
Kansas	-8.7	New Jersey	-0.5
Kentucky	-9.0	Ohio	-0.7
Nebraska	-9.2	Michigan	-0.7
West Virginia	-9.7	Hawaii	-0.8
Montana	-9.9	Arizona	-1.0
Iowa	-10.5	Georgia	-1.0
Wyoming	-10.7	Virginia	-1.3
Oklahoma	-11.6	Maryland	-1.3
North Dakota	-12.0	North Carolina	-1.5
Alabama	-12.5	Delaware	-1.9
Arkansas	-14.3	South Carolina	-2.2
South Dakota	-15.0	Nevada	-4.2
Mississippi	-20.0	Alaska	-4.3

[a] The percentage by which the prices of the goods and services used by providers (input prices) differ from the national average, as indicated by the applicable Medicare wage index for facility-based services, geographic adjustment factor for physician services, and cost of living adjustment for all services in Alaska and Hawaii. A positive value means that input prices in the state are above average.

[b] The percentage by which the costliness of the beneficiary population differs from the national average. A positive value means the composition of the state's beneficiaries is more costly than average (a greater percentage older and male).

SOURCE: ProPAC analysis using data from the Health Care Financing Administration, Office of the Actuary and Bureau of Data Management and Strategy.

cost ratios by payer for 43 states (see Table 5-14). The analysis showed that hospitals in some states were likelier to recover their costs of treating Medicare patients than those in others. Medicare payment to cost ratios ranged from 110 percent in Maryland to 71 percent in New Hampshire. Most states, however, were within five percentage points of the national average of 89 percent.

Maryland and Rhode Island both had Medicare payments that exceeded costs, though probably for different reasons. Maryland has a statewide all-payer rate-setting system, which is designed so that payments from each payer cover the full costs of its patients. There is also an add-on to cover the costs of treating the uninsured. Rhode Island, on the other hand, has low costs and a large share of IME payments compared with other states. It had the fourth lowest standardized resource costs per hospital admission in 1991 (see Table 5-6). Although Rhode Island has historically recovered more of its costs from Medicare than most states, 1993 is the first recent year in which Medicare payments exceeded costs.

Medicaid payments and costs vary more than Medicare's across states for two major reasons. First, though Federal dollars partially finance Medicaid, individual states have considerable flexibility in program design and rate setting. Second, since the 1980s, some states have implemented provider tax programs that are designed to increase Federal payments to DSH hospitals. In these states, overall Medicaid payments went up substantially.

Before 1993, states could design provider tax programs which guaranteed that hospitals' Medicaid DSH payments would at least equal their taxes. In 1993, however, the Health Care Financing Administration (HCFA) implemented rules requiring taxes to be broad-based and prohibiting these "hold harmless" arrangements. This policy change raises the issue of how to most accurately account for these taxes. For 1993 data, it was assumed that these taxes were a general expense allocated among all payers, except in eight states whose tax programs were grandfathered under the old rules.[12] Using this approach, Medicaid payment to cost ratios ranged from 63 percent in Nevada to 231 percent in New Hampshire. Medicaid payments exceeded costs in 14 states, compared with 11 in 1992 and four in 1991. Connecticut and Nevada had the lowest Medicaid ratios (68 percent and 63 percent, respectively).

It is consistent with both Federal policy and customary accounting principles to treat broad-based provider taxes as a general expense. But these taxes could also be considered as a Medicaid revenue offset because they are used only to finance Medicaid services. Had this approach been used in calculating all 1993 Medicaid payment to cost ratios, the ratios would have been far lower in seven states and marginally lower in 10 others. Treating these taxes as Medicaid offsets also would have resulted in higher payment to cost ratios for Medicare, private payers, and uncompensated care.

Under either tax treatment, New Hampshire had the highest increase in its 1993 Medicaid payment to cost ratio. In 1991, the state's 90 percent ratio exceeded the national average, but was below that for several other states. By 1992, this figure had risen to 123 percent, second only to West Virginia. New Hampshire's Medicaid payment to cost ratio in 1993 was either 231 percent or 169 percent, depending on how provider taxes are handled.

New Mexico's 1993 Medicaid payment to cost ratio also grew markedly. In 1992, payments equaled 80 percent of costs; by 1993, New Mexico's ratio was 116 percent. This growth was driven by increases in Medicaid payments that exceeded costs.

West Virginia and North Carolina experienced large decreases in their Medicaid payments as a percentage of costs. West Virginia's Medicaid payment to cost ratio declined to 103 percent in 1993 from 127 percent in 1992. North Carolina's Medicaid payment to cost ratio dropped to 80 percent in 1993 from 91 percent in 1992. These decreases were attributable to increases in Medicaid costs that were higher than the growth in Medicaid payments.

Variation in Cost Shifting

Statewide measures of private payer payment to cost ratios and estimates of gains and losses by payer type also provide important information regarding hospitals' reliance on cost shifting (see Table 5-15). For example, aggregate payments from all payers in Texas exceeded aggregate costs in 1993 by 9.3 percent, mostly because private payer payments were 40 percent higher than costs. The overall pattern of private payer payment to cost ratios was quite similar in 1992 and 1993, with

Table 5-14. Medicare and Medicaid Hospital Payments as a Percentage of Costs, by State, 1993

State	Medicare	State	Medicaid
National average	89%	National average	93%
Maryland	110	New Hampshire	231
Rhode Island	101	Tennessee	131
New Mexico	99	South Carolina	124
Arizona	97	Texas	117
Oregon	97	Maine	116
Washington	96	New Mexico	116
New York	95	Mississippi	116
Massachusetts	93	Maryland	109
Michigan	92	New Jersey	105
Pennsylvania	92	West Virginia	103
Mississippi	92	Virginia	103
Utah	92	South Dakota	103
Florida	91	Ohio	102
Kentucky	91	New York	101
Virginia	91	Indiana	97
California	90	North Dakota	97
North Carolina	90	California	96
Minnesota	90	Montana	92
South Dakota	90	Kentucky	91
West Virginia	90	Georgia	91
Wisconsin	90	Michigan	91
New Jersey	89	Colorado	89
Ohio	89	Missouri	89
North Dakota	88	Utah	89
Georgia	88	Minnesota	88
Kansas	88	Arizona	88
Montana	87	Rhode Island	88
Missouri	87	Washington	88
Texas	87	Iowa	88
Nevada	87	Hawaii	87
Indiana	86	Oregon	86
Colorado	86	Illinois	85
Iowa	86	Massachusetts	83
Illinois	84	Florida	83
Connecticut	84	Wisconsin	81
Hawaii	81	North Carolina	80
Tennessee	81	Pennsylvania	79
South Carolina	81	Nebraska	78
Nebraska	81	Delaware	77
Vermont	80	Vermont	73
Delaware	78	Kansas	72
Maine	75	Connecticut	68
New Hampshire	71	Nevada	63

Note: Ratios were calculated as the payment received from each payer divided by the cost of treating its patients, including both inpatient and outpatient services. These estimates treat state provider taxes as a general expense, which is consistent with Federal rules that require state taxes to be broad-based. Another approach is to view these taxes as an offset to Medicaid payments because they are used to finance care for the Medicaid population. Under this scenario, Medicaid payment to cost ratios would be: California (88 percent), Georgia (83 percent), Illinois (72 percent), Missouri (79 percent), New Hampshire (169 percent), South Carolina (112 percent), and Tennessee (84 percent). Medicare payment to cost ratios would be slightly higher for these states. Data were not available for about half of all community hospitals in 1993, which may affect the accuracy of the values shown. In addition, the sample size was not sufficient to display results for Alabama, Alaska, Arkansas, District of Columbia, Idaho, Louisiana, Oklahoma, and Wyoming. The U.S. totals were calculated using reported and imputed data for all hospitals in all 50 states and the District of Columbia.

SOURCE: ProPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

Table 5-15. Hospital Private Payer Payments and Gains and Losses, by State, 1993 (In Percent)

State	Private Payer Payments as a Percentage of Private Payer Costs	Gains or Losses as a Percentage of Total Costs				
		Private Payer	Medicare	Medicaid	Uncompensated Care[a]	Aggregate Total Gain[b]
National average	129%	10.9%	-4.1%	-0.9%	-4.8%	4.4%
New York	104	1.2	-1.7	0.2	-3.8	-0.3
Rhode Island	109	3.8	0.3	-1.7	-5.1	3.7
Maryland	113	5.0	3.9	1.0	-8.3	3.1
Michigan	114	6.2	-3.0	-1.1	-2.8	3.5
Minnesota	114	6.3	-3.6	-1.6	-1.3	3.4
New Hampshire	116	6.8	-12.1	10.7	-5.8	2.6
Utah	118	9.4	-2.1	-1.4	-3.4	3.4
Massachusetts	119	7.2	-2.7	-1.5	-5.7	1.8
Oregon	120	9.5	-1.2	-1.4	-4.4	5.6
Arizona	122	7.7	-0.9	-2.3	-5.1	3.7
Washington	123	8.6	-1.2	-2.1	-3.5	4.4
Pennsylvania	123	8.7	-3.5	-2.4	-2.7	4.3
South Dakota	124	8.4	-4.8	0.2	-2.0	5.2
Tennessee	124	9.2	-7.5	3.9	-5.9	2.1
Wisconsin	125	10.9	-4.2	-1.5	-2.7	5.1
Ohio	125	9.7	-4.3	0.3	-4.5	5.3
Hawaii	125	11.6	-4.7	-2.7	-3.3	6.9
New Mexico	126	9.2	-0.2	2.5	-7.5	7.6
North Dakota	130	11.0	-5.4	-0.3	-2.2	6.2
Missouri	132	11.9	-5.4	-1.3	-4.2	5.8
Nebraska	132	13.7	-7.8	-2.3	-2.1	5.5
Colorado	133	14.6	-4.8	-1.3	-5.4	6.1
Indiana	133	12.7	-5.7	-0.2	-4.9	5.9
New Jersey	134	11.6	-4.5	0.5	-7.4	3.8
California	134	10.6	-2.8	-1.1	-5.8	3.1
Montana	135	11.6	-5.6	-1.0	-3.3	5.9
Iowa	135	13.2	-6.3	-1.1	-2.0	5.3
Kansas	136	12.7	-5.9	-2.5	-3.7	4.8
Virginia	136	14.5	-3.2	0.3	-7.3	6.4
Illinois	137	15.0	-6.2	-1.9	-4.0	7.1
Connecticut	139	15.1	-6.6	-4.4	-4.5	2.2
Kentucky	140	13.4	-4.0	-1.1	-5.2	6.3
Texas	140	14.3	-4.7	2.1	-5.6	9.3
Georgia	142	14.7	-4.1	-1.3	-7.9	5.9
West Virginia	142	11.9	-4.6	0.4	-6.2	5.1
Maine	144	15.8	-10.7	2.0	-4.7	4.8
Vermont	147	17.8	-8.7	-3.2	-4.5	4.3
North Carolina	147	16.2	-4.0	-2.6	-6.0	7.3
Nevada	147	19.3	-5.2	-2.6	-6.8	6.8
Florida	149	15.3	-3.6	-2.0	-6.8	5.2
Mississippi	150	15.3	-3.5	2.3	-7.7	8.6
Delaware	151	19.3	-8.6	-3.1	-9.3	-0.1
South Carolina	155	16.6	-7.5	3.3	-7.7	7.1

Note: Gains or losses were calculated as the difference between the payment received from each payer and the cost of treating its patients, including both inpatient and outpatient services. These estimates treat state provider taxes as a general expense, which is consistent with Federal rules that require state taxes to be broad-based. Another approach is to view these taxes as an offset to Medicaid payments because they are used to finance care for the Medicaid population. Under this scenario, Medicaid gains as a percentage of costs would be considerably lower in California, Georgia, Illinois, Missouri, New Hampshire, South Carolina, and Tennessee. Medicare and uncompensated care losses and private payer gains as a percentage of costs would be higher in these states. Data were not available for about half of all community hospitals in 1993, which may affect the accuracy of the values shown. In addition, the sample size was not sufficient to display results for Alabama, Alaska, Arkansas, District of Columbia, Idaho, Louisiana, Oklahoma, and Wyoming. The U.S. totals were calculated using reported and imputed data for all hospitals in all 50 states and the District of Columbia.

[a] Operating subsidies from state and local governments were considered as payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Additional subsidies above this level were counted as separate revenue.

[b] Aggregate total gain includes non-patient revenues and other government payers and subsidies.

SOURCE: ProPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

New York, Rhode Island, and Maryland having the nation's lowest ratios.

New York has a large share of urban teaching hospitals that receive GME, IME, and DSH payments, which results in above-average Medicare and Medicaid payment to cost ratios. In addition, New York's statewide rate-setting system influences the degree to which hospitals can cover losses from Medicare, Medicaid, and uncompensated care by increasing payments from private payers. These factors significantly affect the financial condition of the state's hospitals, which in 1993 had a private payer payment to cost ratio of only 104 percent and an aggregate total loss of 0.3 percent. New York was one of only two states that did not have an aggregate gain from patient care services.

As in New York, Maryland's hospitals have limited ability to shift costs to private payers. As noted earlier, hospital rates for each payer are designed to cover the full costs of care under Maryland's rate-setting system. However, unlike New York, Maryland's Medicare and Medicaid rates cover the full costs of care, and aggregate payments from all payers were 3.1 percent higher than aggregate costs.

While losses from Medicaid and uncompensated care were about average for Rhode Island hospitals, slight gains from Medicare and low total costs resulted in very little cost shifting to private payers. Rhode Island's private payer payment to cost ratio (109 percent) was 20 percentage points below the national average, but its aggregate total gain (3.7 percent) was only slightly below the national average.

Delaware and South Carolina hospitals continued to rely on cost shifting to make up for their high costs and indigent care expenses. Delaware's sizable losses from treating Medicare, Medicaid, and uncompensated care patients were covered by gains from treating private-pay patients. Consequently, the state's private payer payment to cost ratio was 151 percent. South Carolina also had large losses from treating Medicare and uncompensated care patients, but gains from Medicaid moderated its reliance on cost shifting. In the state per capita analysis described earlier, resource costs per admission were markedly higher than average for both Delaware and South Carolina.

Large increases in Medicaid revenues for New Hampshire hospitals may have reduced the growth in private payer payment rates. In 1992, New Hampshire's Medicaid gains were 2 percent of total costs; by 1993, they had increased to 10.7 percent. Private payer payments were 137 percent of private payer costs in 1992, but dropped 21 percentage points to 116 percent in 1993.

MANAGED CARE AT THE STATE LEVEL

There is a growing divergence in the organization and financing of health care across states, as insurers and payers replace fee-for-service arrangements with various forms of managed care. Managed care—particularly when it includes capitated payments—attempts to constrain health care costs by controlling both the volume and price of services, while cost-control efforts in a fee-for-service environment focus mainly on price. The differing incentives between these two financing arrangements, coupled with the varying pace at which managed care techniques are being adopted, may increasingly affect the relative level of resources devoted to health care among the states. (See Chapter 3 for an in-depth description of managed care.)

Variation in Managed Care Enrollment

The proportion of people enrolled in capitated managed care arrangements varies both by state and by payer (see Table 5-16).[13] Historically, data on penetration by health maintenance organizations have been reported as the combined HMO enrollments of privately insured, Medicare, and Medicaid individuals as a share of the total state population. These values, however, can mask differences in managed care penetration among these groups. An overall measure also understates HMO penetration because the total state population includes uninsured residents. Separately analyzing managed care enrollments for privately insured individuals, Medicare beneficiaries, and Medicaid recipients results in better information on the actual extent of managed care penetration within a state.

In general, the private sector is leading the managed care phenomenon. In 33 states, at least 10 percent of the privately insured population was enrolled in HMOs in 1993. By contrast, comparable Medicare and Medicaid enrollments had reached these levels in

Table 5-16. Managed Care Enrollment, by State and Payer (In Percent)

State	Private Sector[a]	Medicare[b]	Medicaid[c]
National average	24.1%	5.1%	17.2%
California	51.4	20.9	15.3
Massachusetts	47.8	3.2	61.0
Oregon	40.4	19.9	70.2
Maryland	37.2	0.1	23.9
Rhode Island	36.6	7.8	1.2
Hawaii	33.8	8.9	4.8
Minnesota	31.8	9.1	27.7
Utah	31.8	0.0	42.7
New York	31.4	2.9	12.5
Colorado	30.6	9.5	8.4
Arizona	29.6	23.4	100.0
Connecticut	28.4	0.0	0.0
Wisconsin	28.3	0.0	24.2
New Mexico	25.8	11.6	0.0
Delaware	25.3	0.0	4.1
Michigan	23.6	0.5	20.0
Pennsylvania	22.9	1.7	24.9
Washington	22.5	9.2	55.8
Missouri	21.5	1.8	5.2
Illinois	21.2	3.8	6.9
New Jersey	21.0	0.1	5.0
Florida	20.0	13.1	19.9
Ohio	18.9	1.1	12.7
New Hampshire	17.8	0.0	12.3
Kentucky	17.8	0.5	0.0
Nevada	16.7	15.9	29.7
Vermont	15.6	0.0	0.0
Texas	15.0	2.6	1.5
Louisiana	13.9	0.0	0.0
Oklahoma	13.0	2.1	0.0
Virginia	11.0	0.1	0.0
Georgia	10.8	0.0	0.3
North Carolina	10.5	0.0	14.0
Indiana	9.7	0.3	0.0
Alabama	9.7	0.0	0.0
Kansas	8.5	0.6	0.0
Nebraska	8.5	1.3	0.0
West Virginia	7.4	0.0	0.0
Tennessee	7.2	0.0	100.0
Arkansas	7.0	0.0	0.0
Maine	6.2	0.0	0.0
South Carolina	5.6	0.0	0.0
Iowa	5.2	0.0	8.8
South Dakota	5.1	0.0	0.0
Montana	2.1	0.0	0.0
Idaho	2.0	0.0	0.0
North Dakota	0.6	0.0	0.0
Mississippi	0.1	0.0	0.0
Alaska	0.0	0.0	0.0
Wyoming	0.0	0.0	0.0

[a] Nonelderly privately insured population in health maintenance organizations, July 1993.

[b] Medicare population in risk contracting plans, January 1994.

[c] Medicaid population in fully or partially capitated plans, July 1994.

SOURCE: InterStudy; Employee Benefit Research Institute; Health Care Financing Administration, Office of Managed Care and Medicaid Bureau; and Lewin-VHI, Inc., *States as Payers: Managed Care for Medicaid Populations* (Washington, DC: National Institute for Health Care Management, 1995).

only six and 18 states, respectively. About half of the privately insured populations in California and Massachusetts belonged to HMOs, and one-fifth of the states had enrollments of 30 percent or more. The majority of states with significant enrollments are located near the East or West Coasts, while southern and Plains states have little or no penetration. Provider availability and population density may dictate whether a managed care arrangement can function in certain geographic areas. For example, many rural areas do not have enough residents or providers to support the establishment of an HMO.

Generally, states with the highest private sector HMO enrollments also have relatively high Medicare enrollments, but there are exceptions. For example, about a third of privately insured residents in Maryland and Utah belong to an HMO, yet Medicare enrollment is negligible. Conversely, in Nevada, 16 percent of Medicare beneficiaries are enrolled in risk contracting plans even though the private sector penetration is substantially less than the national average.

The story is similar for Medicaid. In general, states with high private sector HMO penetration also have significant Medicaid enrollments. Medicaid managed care differs from that in the private sector or in Medicare, however, in that participation is driven largely by state policy. For example, almost all Medicaid recipients in Arizona and Tennessee are required to enroll in a managed care arrangement. As discussed in more detail below, a growing number of states are moving in this direction.

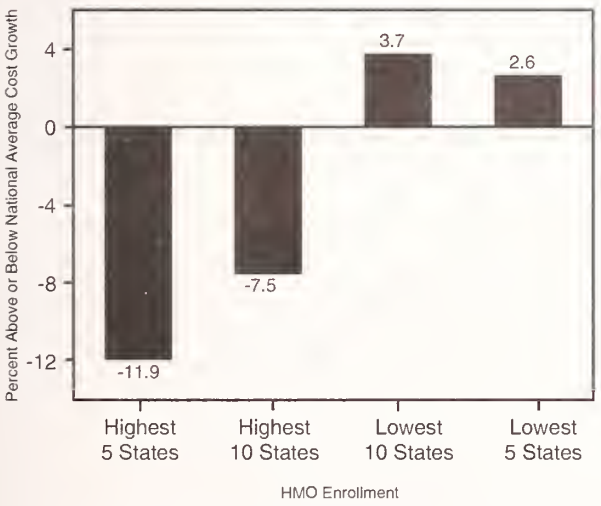
Managed Care and Health Care Costs

To gain some insight into the relationship between the presence of managed care and health care costs, ProPAC compared the growth in total hospital costs per person with the penetration of managed care in each state.[14] Hospital per capita cost growth between 1980 and 1993 was compared with 1993 private sector HMO enrollment. Hospital costs were examined because total health care costs are not documented at the state level. Further, much of the emphasis in managed care is on control of acute inpatient utilization, so hospital cost growth may show more immediate signs of that impact.[15]

The presence of managed care is correlated with the annual growth in total hospital costs per

person. Between 1980 and 1993, hospital costs per capita grew nationally at an annual rate of 8.8 percent. Hospital costs for the five states with the greatest managed care presence in 1993 increased at a combined rate that was about 12 percent below the national average rate (see Figure 5-3). Moreover, for eight of the top 10 managed care states, hospital costs per capita grew slower than the national average (see Table 5-17). Conversely, hospital costs in the five states with the lowest managed care penetration in 1993 grew about 3 percent per year faster than average, and growth in seven of the 10 states with the least managed care was above average. While the variation in hospital cost growth at the individual state level appears to be small, it leads to significant disparities over the entire period. For example, total per capita costs for hospitals in California (where managed care is widespread) grew 156 percent between 1980 and 1993, compared with a 265 percent growth rate for hospitals in South Carolina (where managed care is negligible).

Figure 5-3. Average Hospital Per Capita Cost Growth, 1980-1993, by 1993 Private Sector HMO Enrollment (In Percent)



Note: Hospital per capita cost growth is measured by average annual change in hospital costs per capita, from 1980 to 1993. Private sector health maintenance organization (HMO) enrollment is measured as the percentage of nonelderly privately insured people enrolled in HMOs in 1993. Hospital costs and HMO enrollments were measured based on the location of the hospital or plan. Averages are state-weighted.

SOURCE: ProPAC analysis of data provided by InterStudy, the Employee Benefit Research Institute, the Health Care Financing Administration, the American Hospital Association, and the Department of Commerce, Bureau of the Census.

A similar relationship exists when states are arranged according to their hospital cost growth patterns. The states with the lowest cost increases had twice the share of privately insured residents enrolled in HMOs as states where cost growth was highest (see Figure 5-4). Seven of the 10 states with the lowest annual increases had private sector HMO enrollments above the national average, and all of the states with the greatest cost growth had enrollments considerably below this (see Table 5-18).

While the presence of managed care appears to be associated with lower hospital cost growth, it is difficult to generalize this finding. For example, Hawaii had the sixth highest managed care

Table 5-17. Private Sector HMO Enrollment and Hospital Per Capita Cost Growth for Selected States (In Percent)

Rank	State	1993 Private Sector HMO Enrollment[a]	Hospital Per Capita Cost Growth 1980-1993[b]
1	California	51.4%	6.8%
2	Massachusetts	47.8	8.0
3	Oregon	40.4	8.3
4	Maryland	37.2	7.7
5	Rhode Island	36.6	7.8
6	Hawaii	33.8	9.6
7	Minnesota	31.8	7.5
8	Utah	31.8	9.2
9	New York	31.4	8.6
10	Colorado	30.6	7.5
National average	All	23.8	8.8
41	Maine	6.2	8.1
42	South Carolina	5.6	10.5
43	Iowa	5.2	8.2
44	South Dakota	5.1	9.9
45	Montana	2.1	9.2
46	Idaho	2.0	9.2
47	North Dakota	0.6	9.3
48	Mississippi	0.1	9.3
49	Alaska	0.0	8.1
50	Wyoming	0.0	9.0

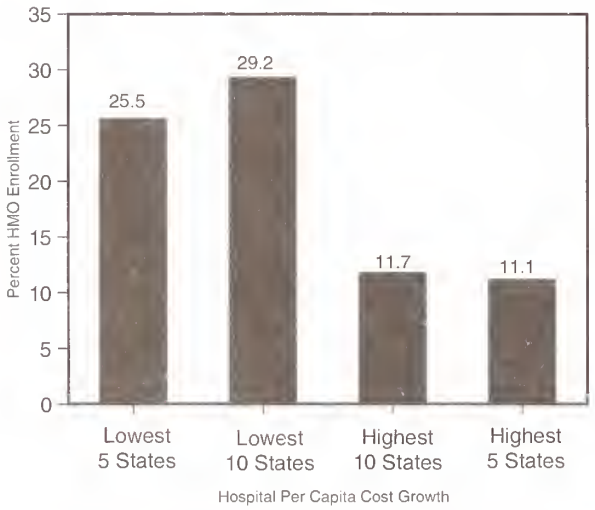
Note: HMO = health maintenance organization.

[a] Private sector HMO enrollment is based on 1993 plan-level data as a proportion of each state's nonelderly privately insured population.

[b] Hospital per capita cost growth is measured as annual change in hospital costs per capita from 1980 to 1993.

SOURCE: ProPAC analysis of data provided by InterStudy; Employee Benefit Research Institute; American Hospital Association; and Department of Commerce, Bureau of the Census.

Figure 5-4. Average Private Sector HMO Enrollment, 1993, by 1980-1993 Hospital Per Capita Cost Growth (In Percent)



Note: Hospital per capita cost growth measured by average annual change in hospital per capita costs from 1980 to 1993. Private sector health maintenance organization (HMO) enrollment is measured as the percentage of nonelderly privately insured people enrolled in HMOs in 1993. Hospital costs and HMO enrollments were measured based on the location of the hospital or plan. Averages are state-weighted.

SOURCE: ProPAC analysis of data provided by InterStudy, the Employee Benefit Research Institute, the American Hospital Association, and the Department of Commerce, Bureau of the Census.

presence in 1993, but above-average cost increases between 1980 and 1993; Utah showed a similar pattern. Conversely, Nevada and Kansas had among the lowest hospital cost growth rates in the nation, yet their managed care penetration was below the national average. In addition, several of the states with a major managed care presence and below-average cost growth—including Maryland, Massachusetts, and New York—also maintained hospital rate-setting programs throughout the 1980s that were designed to control rising hospital costs per admission. This information demonstrates that a number of factors influence health care costs. Managed care may be one of these factors, but the extent of its effect requires further study.

The presence of managed care also appears to be related to the mix of services used in providing health care. Focusing on Medicare standardized resource costs per enrollee (because comparable data are not available for all payers), states with the largest shares of Medicare managed care enrollment exhibit Medicare cost patterns by health care setting that differ markedly from those with low managed care participation (see Figure 5-5). As discussed earlier, state-level differences in Medicare costs for each of the settings are driven primarily by the volume of services provided. Managed care in a state can potentially influence Medicare costs in two ways. It can affect Medicare costs directly, to the extent that the volume of services provided to managed care enrollees differs from that provided to fee-for-service beneficiaries. Moreover, because most states where Medicare managed care is widespread also have a significant number of private sector managed care arrangements, overall practice pattern changes resulting from the presence of managed

Table 5-18. Hospital Per Capita Cost Growth and Private Sector HMO Enrollment for Selected States (In Percent)

Rank	State	Hospital Per Capita Cost Growth 1980-1993[a]	1993 Private Sector HMO Enrollment[b]
1	Nevada	6.0%	16.7%
2	California	6.8	51.4
3	Kansas	7.4	8.5
4	Illinois	7.4	21.2
5	Arizona	7.4	29.6
6	Minnesota	7.5	31.8
7	Colorado	7.5	30.6
8	Maryland	7.7	37.2
9	Wisconsin	7.7	28.3
10	Rhode Island	7.8	36.6
National average	All	8.8	23.8
41	Georgia	9.7	10.8
42	South Dakota	9.9	5.1
43	New Jersey	9.9	21.0
44	North Carolina	10.0	10.5
45	Louisiana	10.0	13.9
46	Tennessee	10.1	7.2
47	Kentucky	10.3	17.8
48	Arkansas	10.3	7.0
49	South Carolina	10.5	5.6
50	New Hampshire	10.9	17.8

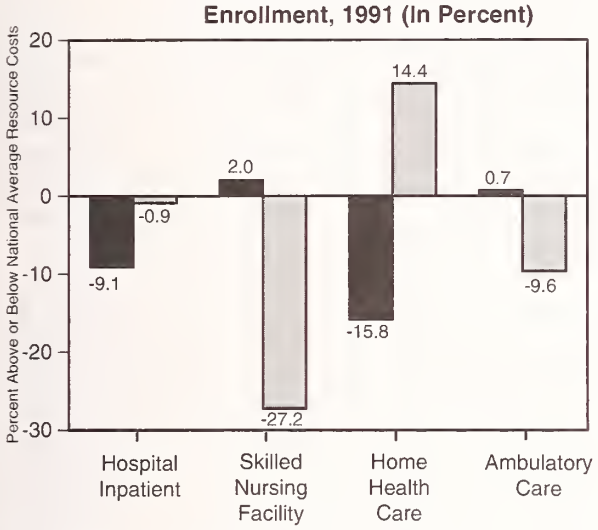
Note: HMO = health maintenance organization.

[a] Hospital per capita cost growth is measured as annual change in hospital costs per capita from 1980 to 1993.

[b] Private sector HMO enrollment is based on 1993 plan-level data as a proportion of each state's nonelderly privately insured population.

SOURCE: ProPAC analysis of data provided by InterStudy; Employee Benefit Research Institute; American Hospital Association; and Department of Commerce, Bureau of the Census.

Figure 5-5. Medicare Standardized Resource Costs for Selected Settings, by Medicare Managed Care Enrollment, 1991 (In Percent)



10 states with highest Medicare managed care enrollment

10 states with lowest Medicare managed care enrollment

Note: Medicare managed care enrollment is measured as the percentage of Medicare beneficiaries enrolled in risk or cost contracts, or health care prepayment plans. Averages are state-weighted.

SOURCE: ProPAC analysis using data from the Health Care Financing Administration, Office of the Actuary, Bureau of Data Management and Strategy, and Office of Managed Care; and the Departments of Defense and Veterans Affairs.

care may affect the volume of care provided to all Medicare beneficiaries within their borders.

On average, the 10 states with the highest Medicare managed care enrollments had lower inpatient hospital and home health costs per enrollee and greater SNF and ambulatory care costs than states where participation was low. These results are consistent with other studies that have examined the impact of managed care. (See Chapter 3.) Managed care seeks to control hospital inpatient costs by treating patients in less expensive settings. SNF and ambulatory services are generally viewed as substitutes for at least some portion of an inpatient stay. Therefore, it is consistent with the premise of managed care that hospital inpatient costs were about 9 percent lower than the national average in the states with high managed care penetration, but that SNF and ambulatory costs were, respectively, 2 percent and 1 percent higher than average.

Interestingly, however, the use of home health services generally is lower in managed care states. These costs were about 16 percent below average in states where managed care was widespread, but 14 percent above average in states with low managed care enrollments. This suggests that home health care may serve not only as a substitute for care provided in more expensive sites, but also as a vehicle for the provision of additional services, which would be more limited under managed care.

STATE REGULATORY ACTIVITIES

State governments can affect the delivery and financing of health care services within their borders. Particularly for Medicaid, states have a direct influence over a large share of overall health care payments. In addition, state regulatory actions that affect health care providers and private payers can also alter overall spending and cost patterns.

The level of state regulatory activity increased in the early 1990s, largely in response to the growing number of uninsured residents and the rapid growth in health care spending, especially for the Medicaid program. Every state has enacted some type of health care legislation over the past five years. Most of these measures target specific components of the health care system, such as insurance coverage, provider collaborations, or medical malpractice. Several states, including Minnesota, Oregon, Vermont, and Washington, have enacted comprehensive measures to contain costs and achieve universal coverage. Others have targeted their Medicaid programs, seeking ways to control spending growth while expanding access to uninsured residents.

In general, states are no longer looking to comprehensive reforms to address their health care concerns. In 1994, only one state—Minnesota—enacted a measure that could be viewed as comprehensive. Measures passed in Vermont and Washington have stalled or are being scaled back. No other states are seriously considering legislation that would overhaul their current systems.

Many states halted comprehensive reform discussions last year because of the Federal health reform debate. In addition, it is proving difficult for those states that pass measures to implement them. One major obstacle is the Employee Retirement

Income Security Act of 1974 (ERISA), which limits states' abilities to regulate health care for the large number of residents enrolled in employers' self-insured health plans.[16] Without an ERISA waiver, states effectively cannot impose all-inclusive standard benefit packages, employer coverage mandates, or other measures to achieve universal health coverage.[17]

Today, Medicaid is the major focus of state reform efforts. A number of states have recently received, or are seeking, waivers from Federal requirements to restructure and expand their Medicaid program. States also are pursuing incremental measures to address specific components of the health care system. Most states are relying on reforms in these two areas to achieve the goals of cost containment and increased health care access.

Medicaid Section 1115 Demonstration Programs

Many states are turning to managed care to control Medicaid spending growth and expand access to health care for the uninsured. Those wishing to implement statewide mandatory managed care programs generally pursue a demonstration waiver, authorized under Section 1115 of the Social Security Act. These waivers exempt states from certain statutory and regulatory requirements and generally are granted for a limited time, usually five years. A waiver is necessary if states want to mandate a managed care system for Medicaid recipients.[18]

Before 1993, only Arizona operated a statewide managed care program under a Section 1115 waiver. In 1993, the Federal government streamlined the waiver process and eased some of the requirements. As a result, eight states—Florida, Hawaii, Kentucky, Massachusetts, Ohio, Oregon, Rhode Island, and Tennessee—have received Federal approval to implement programs, and a number of others have submitted proposals or have programs in the planning stages.[19] In addition to receiving a Federal waiver, state legislative approval of program funding is needed before implementation can begin. The Florida and Kentucky programs are still awaiting that approval. For most of the demonstration programs, states anticipate using savings generated from enrolling recipients in managed care plans to help fund the expansion of eligibility to additional uninsured persons.

The principal populations enrolled in the statewide programs initially have been low-income women and children, rather than aged or disabled persons. The exclusion of the aged and disabled, however, diminishes the extent to which savings can be realized. While women and children account for a majority of the traditional Medicaid population, they are responsible for only about a third of Medicaid spending. (See Chapter 3.) In addition, most programs exclude long-term care, which represents a significant share of Medicaid dollars.

Despite the enrollee limitations of statewide Medicaid programs, early evidence from Oregon and Tennessee indicates that statewide managed care arrangements have the potential to reduce expenditures while expanding access. Oregon began to enroll recipients into its plan in February 1994. After one year of implementation, emergency room visits to hospitals declined 4.5 percent, hospital charity care dropped about 18 percent, and hospitals' bad debt fell 7.6 percent.[20] Oregon also expanded Medicaid eligibility to include all people with incomes less than the Federal poverty level (FPL); previously, Medicaid eligibility was limited to those earning less than 67 percent of the FPL. As a result, more than 100,000 previously uninsured persons now have health care coverage. Tennessee's program was implemented in January 1994. After one year of operation, the state reports that health insurance coverage increased from 89 percent to 94 percent, emergency room usage has declined markedly, and the Medicaid budget has grown only 2 percent—significantly less than the 15 percent previously projected.[21]

Although statewide Medicaid managed care programs appear to be having some positive effects, there are a number of uncertainties. For example, it is difficult to estimate the number of new enrollees when eligibility is expanded. In the first year of Oregon's program, 108,000 people enrolled, about 40,000 more than originally anticipated.[22] Tennessee had to close enrollment for the working uninsured because of higher than expected enrollments and disenrolled about 20,000 people for failing to pay their premiums.[23] Tennessee also has had difficulty enlisting provider participation due primarily to low payment rates. Finally, while it appears that access may be improved under Medicaid demonstration programs, the impact on quality is still to be determined.

It is too early to assess the overall impact of implementing Section 1115 demonstration programs on states' overall health care spending. The increasing number of 1115 waiver demonstration proposals suggests, however, that many states view managed care as a viable mechanism for slowing Medicaid spending growth and reducing the number of uninsured. States' success in achieving these two goals will most likely affect their overall health care spending patterns.

Other State Regulatory Activity

As discussed above, states' abilities to reform their entire health care system are hampered in part because ERISA precludes them from regulating self-insured health plans. Consequently, states are attempting to achieve cost containment and increased access through incremental measures. The most common reforms involve the expansion of access to health insurance for employees of smaller firms (generally defined as having 50 or fewer workers). In 1994, 43 states enacted some type of insurance reform.[24] Most of these reforms focus on guaranteeing that insurers offer polices to all small employer groups or to all employees within an insured firm. A number of laws also require insurers to continue health insurance coverage when workers change employers, and to limit the ability of insurers to implement new waiting periods or exclude employees based on preexisting conditions at the time of coverage renewal. Seven states passed laws in 1994 that created purchasing pools for small employers to consolidate risk and reduce administrative costs.

Eight states passed community rating or modified community rating laws, raising to 19 the number of states that have passed such measures. Community rating prohibits insurers from using health status factors or prior utilization of health care services to set premium rates. Under these laws, individuals generally pay similar insurance rates, thus protecting sicker or older persons who otherwise would pay much higher premiums. Finally, seven states have authorized the establishment of medical savings accounts, which allow individuals to deposit pre-tax money into accounts that are used to pay for health care services.

Other sectors of the health care system continued to receive legislative attention in 1994. Topics included data collection, malpractice reform, and antitrust immunity for health care provider collaborations. The emphasis in managed care to concentrate service use among a limited set of providers caused nine states to enact laws (known as "any willing provider" statutes) which prohibit health plans from excluding providers that are willing to accept the plan's payment rates and can meet its participation requirements. Only two of these laws, however, apply to all health care providers; the others focus more narrowly on either pharmacies or non-physician practitioners.

It is difficult to assess the impact of incremental measures on their intended goals. The evidence accumulated to date, though, suggests they may be having only a limited effect. Recent studies of small market insurance reforms and community rating laws have concluded that these measures had only a negligible effect on states' overall uninsurance rates.[25] In addition, while 20 states have enacted state antitrust immunity statutes, very few provider collaborations have invoked them.[26] More analysis is needed, however, to assess the overall impact of incremental measures. Whether they are successful will have important implications for future state reform policies.

CONCLUSIONS

There are great differences among the states in the resources devoted to treating aged Medicare beneficiaries. Standardizing for two of the most important sources of geographic variation—provider input prices and beneficiary age and sex—does not eliminate these differences, but the relative costliness of many of the states is far different than indicated by actual (non-standardized) resource costs. Most notably, the states with the highest standardized costs were all located in the South, a fact that is masked by the low input prices of this region. Several states traditionally believed to be among the most costly, including Massachusetts, New York, and New Jersey, were actually below average in the resources used in caring for the elderly. Oregon and Hawaii had the lowest standardized costs—24 percent below the national average—and Louisiana's were the highest—25 percent above average.

The implication of these findings is that medical practice varies significantly across the country.

ProPAC will undertake a comprehensive analysis of the reasons for this, but preliminary data suggest that one of the key factors is health status. Standardized resource costs are highest in the South not because the unit cost of producing health care services is greater, but because residents use more services. This in turn appears to be linked to unhealthy populations. The residents of some the lowest-cost states—such as Oregon, Hawaii, Utah, and Minnesota—appear to be much healthier than those in the South and they receive much less care. This suggests a compelling need for risk adjustment in any system of capitated payment.

Besides differing in the costliness of health services, states vary in the level of payment for care and the mix of payers. In the hospital sector, there was considerable variation in the magnitude of losses that providers sought to cover through cost shifting in 1993 as well as in the source of those losses. The range of payments relative to treatment costs was particularly wide for Medicaid, due primarily to the Medicaid disproportionate share adjustment.

Finally, the states also vary substantially in the degree to which private and public sector reforms have been undertaken. The leading private sector reform in recent years has been the introduction of managed care, which as of 1993 varied from over 50 percent penetration in California to virtually no presence in several states. Growth in hospital costs appears to have been constrained in the states with the highest managed care enrollment, although managed care penetration may be only one of several factors that affect cost increases. Major reforms legislated by the states, aimed at controlling costs and reaching universal coverage, have not moved forward in the wake of the Federal government's decision not to pursue reform last year. But several Medicaid reforms, designed to move recipients into managed care and use the savings to expand eligibility, have been implemented through program waivers, and a number of states have passed small-scale market reforms.

Notes to Chapter 5

1. Provider costs for facility-based services were estimated by applying a facility-specific cost to charge ratio (constructed from Medicare Cost Report data) to the charge associated with each bill for service (contained in the Medicare claims files). Then a ratio of total provider costs to total program payments was constructed for the fee-for-service care provided to aged Medicare beneficiaries living in each state. These ratios were then applied to total program payments plus HMO premiums, as estimated recently by the Health Care Financing Administration's Office of the Actuary. This latter step was taken not only to account for the care provided through HMOs, but to ensure that ProPAC's cost estimates would be consistent with the spending estimates that HCFA will be publishing in the near future.

   It is impossible to measure provider costs for physicians and other practitioners, and cost data were not available for some of the smaller facility-based services such as dialysis facilities and free-standing ambulatory surgical centers. Payments were used to represent costs in these cases, but actual cost data were used for more than two-thirds of all Medicare covered services.

2. The Departments of Defense and Veterans Affairs provided ProPAC with counts of the services they delivered to those age 65 and over in 1991, which were then valued at average Medicare unit costs. The services included hospital admissions, ambulatory surgeries, and physician visits for DoD facilities, and these plus skilled nursing facility days and home health visits for VA facilities. Both the DoD and VA took steps to limit their counts to services that would have been covered under Medicare and to attribute the services to the private sector setting where they likely would have been provided. It was not possible to determine whether each elderly patient treated in the DoD and VA systems was eligible for Medicare. Nonetheless, non-eligibility was believed to have resulted in only a 2 percent to 5 percent overestimate of DoD and VA costs attributable to Medicare patients. This would then be less than a 0.2 percent overestimate of total resource costs.

3. Input prices were controlled for using wage indexes (applied to labor costs) for facility-based services, the geographic adjustment factors for physician services, and the cost of living adjustment (applied to non-labor costs) for all services in Hawaii and Alaska. The most accurate wage index possible was used, which was not always the one used in making payments. This involved employing more recent wage data as well as adjusting for occupational mix in the work force. Even though the final standardized resource costs were aggregated by state of patient residence, the input price adjustments reflected the location of the provider, even if in another state.

   The age and sex adjustment was based on national cost per enrollee weights for six groups—male and female age 65 to 74, 75 to 84, and 85 and over. These weights were derived from Medicare claims file data, with separate adjustments calculated for each of eight settings.

4. Maryland's standardized resource cost per inpatient admission ranks only thirty-fourth lowest, but this statistic may not be comparable to those of the other states. ProPAC controlled for wage differences among the states under the theory that wage levels are almost completely outside of hospital influence. With payment rates constrained for all hospitals in the state, however, Maryland hospitals may have been able to control wage rates to some degree. This would be difficult to prove, but the possibility is strongly suggested by the wage index for the Baltimore metropolitan area. Despite being one of the 10 largest cities in the country, which would be expected to result in some of the nation's highest wages, Baltimore's wage index is only the eighty-sixth highest, at 0.9866.

5. Beneficiary payments for services in the fee-for-service sector were measured using the Medicare claims files. For services received by HMO enrollees, however, it was necessary to estimate beneficiaries' out-of-pocket costs using adjusted community rate proposal data obtained from HCFA's Office of Managed Care.

6. W. Pete Welch and others, "Geographic Variation in Expenditures for Physicians' Services in the United States," *New England Journal of Medicine* 328(9):621-27, March 4, 1993.

7. This age and sex adjustment is unique to the volume and cost per unit analysis. It is based on the number of hospital admissions, SNF patient days, or home health visits per enrollee in each age and sex group nationally.

8. The approach of valuing services at national average payment rates works well for PPS and dialysis services, because their Medicare payments are based on national rates. For PPS, a single national payment per admission was calculated and then multiplied by both the average case-mix index and number of admissions in each state, producing the desired measure driven by the number and intensity of services. The method is also accurate for physician services, where a set of geographic index values developed by the Physician Payment Review Commission was used to control for local payment rate differences.

   Where payment is cost-based, however, including PPS-excluded inpatient, SNF, home health, and hospital outpatient services, a somewhat less accurate approach had to be used. The only adjustment made was to control for wage differences using the payment system wage indexes. However, the accuracy of the measure was enhanced by the influence of payment limits; that is, the lower of the applicable payment limit or actual unit cost for each service was used in the analysis, limiting the effects of unusually high-cost facilities. This produced a measure that does reflect differences in the number and intensity of services, as desired, but is still biased somewhat by costliness differences among providers.

9. Katharine R. Levit, "Personal Health Care Expenditures, by State: 1966-1982," *Health Care Financing Review* 6(4):1-49, Summer 1985.

10. The underlying state-level Medicare spending estimates used for this analysis were prepared by the Health Care Financing Administration, Office of the Actuary.

11. For facility-based services, the methodology used for estimating provider costs automatically included the costs associated with beneficiary payments. For physicians, other practitioners, and small facility-based services (such as hospice), the payments used to represent costs included all payments made by or on behalf of beneficiaries.

12. In 1993, taxes were treated as a Medicaid revenue offset in Kentucky, Maine, Montana, Nevada, North Dakota, Oregon, Texas, and West Virginia. Prior to 1993, this approach was applied in all states.

13. Capitated managed care refers to those arrangements in which the managed care entity is at risk financially for the cost of enrollees' health services. Capitated managed care enrollments are measured here in slightly different ways across the three payer groups, but the measures are comparable. For the private sector, enrollment in HMOs is measured. For Medicare, capitated managed care is the share of Medicare beneficiaries that are enrolled in risk contracting plans. Medicaid capitated managed care reflects recipient enrollment in both fully and partially capitated plans.

14. The data used in this analysis were not adjusted for patient migration, unlike earlier sections of this chapter that discussed Medicare costs per enrollee.

15. Hospital costs are from the American Hospital Association Annual Survey of Hospitals; population data are from the Bureau of the Census. The hospital cost variable reflects both inpatient and outpatient service expenses. All hospitals were reflected in this analysis, including those operated by the Departments of Defense and Veterans Affairs.

16. A number of states have sought a Federal statutory waiver from ERISA; to date, only Hawaii's health program has received such an exemption.

17. The U.S. Supreme Court recently held, however, that ERISA does not preclude states from imposing surcharges on all hospital bills—including those of patients enrolled in self-

insured plans—to help finance uncompensated care. See *New York State Conference of Blue Cross & Blue Shield v. Travelers Insurance Co.*, U.S. Sup. Ct. No. 93-1408 (April 26, 1995).

18. Under the Medicaid statute, recipients must be free to choose among participating providers. More limited waivers under Section 1915(b) of the Social Security Act also permit states to restrict recipients' choice of providers.

19. HCFA publishes monthly descriptions of approved, disapproved, and pending 1115 demonstration projects in the *Federal Register*. See, for instance, Health Care Financing Administration, "New and Pending Demonstration Project Proposals Submitted Pursuant to Section 1115(a) of the Social Security Act," *Federal Register* 60(61):16481, March 30, 1995.

20. Data from the Oregon Hospital Association.

21. Rusty Siebert, director, TennCare, Nashville, TN, personal communication, May 4, 1995.

22. "Oregon Health Plan After One Year Rated Success, Next Step Uncertain," *BNA's Health Care Policy Report* 3(7):246-48, February 13, 1995.

23. Siebert, personal communication, May 4, 1995.

24. Lisa Atchison, *Health Insurance, An Overview of 1994 State Legislative Activity* (Washington, DC: George Washington University Intergovernmental Health Policy Project, December 1994).

25. Kala Ladenheim and Anne Markus, *Community Rating: States' Experience* (Washington, DC: George Washington University Intergovernmental Health Policy Project, funded by the Commonwealth Fund, July 1994); Anne Markus, Kala Ladenheim, and Lisa Atchison, *Small Group Market Reforms: A Snapshot of States' Experience* (Washington, DC: George Washington University Intergovernmental Health Policy Project, funded by the Commonwealth Fund, February 1995).

26. "Special State Exemption Statutes Are Generating Very Little Activity," *BNA's Antitrust and Trade Regulation Report* 68(1702):310-11, March 2, 1995.

Appendixes

Appendix A. Biographical Sketches of Commissioners

Stuart H. Altman, Chairman

Stuart H. Altman is the Sol C. Chaikin Professor of National Health Policy at the Florence Heller Graduate School of Social Policy at Brandeis University. An economist whose research interests are primarily in the area of Federal health policy, he has been at Brandeis since 1977. Between 1971 and 1976, Dr. Altman was deputy assistant secretary for planning and evaluation/health at the Department of Health, Education, and Welfare (now the Department of Health and Human Services). From 1973 to 1974, he also served as the deputy director for health of the President's Cost of Living Council, where he was responsible for developing the council's program on health care cost containment. Dr. Altman is a member of the Institute of Medicine of the National Academy of Sciences and a former member of its governing council, and serves on the board of Beth Israel Hospital (Boston). He is a past president of the Association for Health Services Research and a former board member of the Robert Wood Johnson Clinical Scholars Program. He has testified before the Congress on a wide range of health policy issues and has written an array of articles in the field. Dr. Altman received a B.B.A. from the City College of New York, and both an M.A. and a Ph.D. in economics from the University of California, Los Angeles.

Susan S. Bailis

Susan S. Bailis is executive vice president and chief operating officer of The A•D•S Group, which specializes in long-term care and senior living. From 1983 to 1985, Ms. Bailis was associate director of New England Medical Center, where she managed the hospital's entry into the long-term care field. Earlier, she was director of social services at the medical center. Ms. Bailis has held a number of academic appointments, most recently as assistant professor of psychiatry at Tufts University School of Medicine. She serves on the boards of several hospitals and has held leadership positions in many local and national professional and community organizations. These include the executive committee of the American Health Care Association, president of the Massachusetts Federation of Nursing Homes, the board of the Alzheimer's Disease and Related Disorders Association, the board of Simmons College, the board of overseers of the Florence Heller School at Brandeis University, secretary of the National Association of Social Workers, and president-elect of the Society for Hospital Social Work Directors of the American Hospital Association. She is a member of the Business Leadership Forum and Women's Leadership Forum of the Democratic National Committee. She also served as a member of the Massachusetts Medicaid State Advisory Board. Ms. Bailis has published and lectured widely on health care and social welfare policy. She received a B.A. from Brandeis University and an M.S.W. from Simmons College School of Social Work.

Richard A. Berman*

Richard A. Berman is president of Manhattanville College. Formerly, he was president and chief executive officer of Howe-Lewis International and previously was a vice president of Korn/Ferry International responsible for the health care practice in the firm's eastern region. Mr. Berman was also a practice leader for health care at McKinsey & Company, Inc. He serves as a trustee of the State University of New York. In addition, he is a member of New York State's Health Care Financing Council, New York's Governor's Task Force on Health Reform, and the New York State Legislature's Review Panel on Empire Blue Cross Blue Shield. Mr. Berman was the executive vice president of New York University Medical Center from 1983 to 1986. He was a cabinet official for New York State from 1977 to 1982, first as director of the New York State Office of Health Systems Management and later as the commissioner of the Division of Housing and Community Renewal. Before that, Mr. Berman served as director of health policy for the U.S. Economic Stabilization Program, and as special assistant to the assistant secretary of health, Department of Health and Human Services. He also has held administrative positions at the New York Hospital, Cornell University Medical School, the Robert Wood Johnson Foundation, and the University of Utah Hospital. He is a member of

the Institute of Medicine of the National Academy of Sciences and a fellow of the American College of Healthcare Executives. Mr. Berman has published many articles in the health care field. He received B.A., M.B.A., and M.H.A. degrees from the University of Michigan.

James D. Bernstein

James D. Bernstein is director of the North Carolina Office of Rural Health and Resources Development, which has established 65 community-based health centers and recruited more than 1,100 providers to the state since 1973. Previously, Mr. Bernstein administered a 40-bed hospital and eight health centers for the Indian Health Service. He has held a variety of professional positions, including chairman of the Rural Health Care Advisory Panel of the Office of Technology Assessment. He currently is national program director for the Robert Wood Johnson Foundation initiative, Practice Sites: State Primary Care Development Strategies, and is president of the National Rural Health Association. Mr. Bernstein received a B.A. from the Johns Hopkins University and an M.H.A. from the University of Michigan.

Clay D. Edmands

Clay D. Edmands is president of Asbury-Salina Regional Medical Center in Salina, Kansas, an acute care rural referral center. He was active in the development of Health Frontiers, Inc., a large multihospital organization that has been replaced by Voluntary Hospitals of America. His prior experience includes several years with the Fairview Hospital System in Minneapolis, Minnesota, where he held various positions, among them administrator for development and operations of regional health management and supportive services. Mr. Edmands was on the board of the Kansas Hospital Association from 1980 to 1992, serving as chairman, treasurer, and member of the executive committee. In addition to two terms on a regional policy advisory board of the American Hospital Association, Mr. Edmands has been board president of the Health Systems Agency of Western Kansas. Other community involvements include the Salina health education board and Voluntary Hospitals of America. Currently a preceptor for the University of Kansas program in health care administration and chair of the university's health care services advisory board, Mr. Edmands formerly was a faculty preceptor for the University of Minnesota independent study program in hospital administration. He holds a B.S. in business administration from the University of Kansas and an M.H.A. from the University of Minnesota.

Spencer Johnson

Spencer Johnson has been president of the Michigan Health and Hospitals Association since 1985. Previously, he was executive vice president of the Hospital Association of New York State. Mr. Johnson's prior experience includes staff positions on the U.S. Senate Committee on Human Resources and in the U. S. House of Representatives. He was associate director of the Domestic Council for Health, Social Security, and Income Assistance from 1976 to 1977, where he was responsible for policy planning and development for President Gerald Ford. Mr. Johnson has been a member of the American Hospital Association's State Issues Forum and Council on Allied and Government Relations. He has served on various boards, including those of the Albany Medical College, Washington Hospital Center, the Alpha Center for Health Planning, and the Genesee Regional Health Planning Council. Mr. Johnson received a B.A. in journalism from St. Bonaventure University and a M.P.A. in health policy and planning from Cornell University.

William S. Hoffman*

William S. Hoffman has been director of the Social Security Department of the International Union of the United Auto Workers since 1984. Previously, he was the assistant director and a consultant to the department. Dr. Hoffman is also director of the Michigan Health and Social Security Research Institute, Inc., where from 1973 to 1980 he was a senior research associate. An active participant in national and state health care issues, Dr. Hoffman has served on the Michigan Certificate of Need Commission, the Department of Health and Human Services' Council on Graduate Medical Education, the Department of Labor's Advisory Council on Employee Welfare and Pension Benefit Plans, the Governor's Task Force on Access to Health Care in Michigan, and various study committees of the Institute of Medicine of the National Academy of Sciences. He is a member of the

National Academy of Social Insurance and an adjunct professor of sociology at Wayne State University. Dr. Hoffman has written and spoken extensively on such issues as the use of prepaid mental health care services and organized labor's perspective on current health care issues and legislation. He received a B.A. in psychology from Otterbein College, and M.A. and Ph.D. degrees in sociology from Wayne State University.

Clark E. Kerr

Clark E. Kerr is president of ConsumerFirst, a nonprofit public benefit corporation. He also is president of the California Business Group on Health, where he manages the legislative agenda. He chairs the California Health Policy and Data Advisory Commission and the Consumer Experience Studies Committee of the Health Benefits Advisory Council for the California Public Employees Retirement System. In addition, Mr. Kerr is executive producer and cohost of Health Upbeat, a television series providing information on health care quality, access, and costs to the public. Before joining ConsumerFirst, he held various positions at Bank of America, including vice president of government relations, manager of corporate health programs, and manager of benefits planning. Mr. Kerr received a B.A. from the University of California, Davis, and an M.B.A. from the University of California, Berkeley.

James R. Kimmey

James R. Kimmey is vice president for health sciences and professor of public health at the St. Louis University Health Sciences Center, as well as professor of community and family medicine at the St. Louis University School of Medicine. In addition, Dr. Kimmey has taught at the University of Wisconsin, the Johns Hopkins University, New York University, and Columbia University. He was administrator of the Division of Health Policy and Planning of the state of Wisconsin and executive director of the American Public Health Association in New York and Washington State. Dr. Kimmey served as president of the American Health Planning Association (1980–81) and is a member of its board of directors. Former editor of *Health Planning Memorandum* and managing editor of the *American Journal of Public Health*, he has written extensively on health planning and other health policy topics. Dr. Kimmey received B.S., M.S., and M.D. degrees from the University of Wisconsin and an M.P.H. from the University of California, Berkeley.

Judith R. Lave

Judith R. Lave is professor of health economics and codirector of the Center for Research on Health Care at the University of Pittsburgh. Her primary academic appointment is in the Graduate School of Public Health, but she holds secondary appointments in the Department of Psychiatry, Department of Economics, and the Katz Graduate School of Business. She is a member of the research study section of the Agency for Health Care Policy and Research and of the Institute of Medicine's report review committee. Formerly, Dr. Lave was a faculty member at Carnegie-Mellon University. At the Department of Health and Human Services, she was director of the Division of Economic and Quantitative Analysis in the Office of the Deputy Assistant Secretary and director of the Office of Research in the Health Care Financing Administration. A charter member of the Federal government's Senior Executive Service, Dr. Lave is also a member of the Institute of Medicine of the National Academy of Sciences and the National Academy of Social Insurance. She is a past president of the Association for Health Services Research and the Foundation for Health Services Research. In addition, Dr. Lave chaired the technical panel on health and was a member of the expert panel on income and health care for the Advisory Council on Social Security. She serves on the editorial boards of both the *Journal of Health Politics, Policy and Law* and the Health Administration Press. Dr. Lave has served as a consultant to private and public agencies in the United States and Canada. She received a B.A. from Queens University in Canada, from which she also holds an honorary LL.D., and a Ph.D. in economics from Harvard University.

Hugh W. Long

Hugh W. Long is associate professor of health systems management at the Tulane University School of Public Health and Tropical Medicine. He also holds appointments with Tulane's Freeman School of Business, School of Law, and Graduate Faculty. Dr. Long has taught at Yale University, Stanford University, San Jose State University, and

Ohio State University. He is a member of the Medicare Geographic Classification Review Board. Dr. Long has served as a witness and ad hoc adviser on health care financing to the U.S. House of Representatives' Committee on Ways and Means and to the U.S. Senate Committee on Finance. He has written numerous articles on health care financing and management and serves on the editorial board of *Decisions in Imaging Economics*. Dr. Long has served on the New Orleans MetroVision Medical Task Force. He is a member of the Louisiana bar. Dr. Long received a B.A. from Ohio State University, an M.B.A. and a Ph.D. in business administration and finance from Stanford University, and a J.D. from the Tulane University School of Law.

Larry L. Mathis*

Larry L. Mathis has, since 1983, been president and chief executive officer of The Methodist Hospital System in Houston, Texas, which includes 10 member corporations and The Methodist Hospital. Before that, Mr. Mathis held a number of positions at The Methodist Hospital. Former chair of the Greater Houston Hospital Council and the Texas Hospital Association, he was also chairman of the American Hospital Association and speaker of its House of Delegates. Mr. Mathis is also a former member of the administrative board of the Association of American Medical Colleges' Council of Teaching Hospitals and a past governor of District VI of the American College of Healthcare Executives. He chaired the National Advisory Council on Health Care Technology Assessment from 1985 to 1988 and was a consultant to the Ministry of Education and Culture in Brazil. Mr. Mathis received a B.A. in social sciences from Pittsburg State University in Kansas and an M.H.A. from Washington University.

Robert J. Myers

Robert J. Myers was chief actuary of the Social Security Administration from 1947 to 1970 and deputy commissioner of Social Security from 1981 to 1982. Currently, he is a member of the Committee of Actuaries of the United Nations Joint Staff Pension Fund, as well as president of the International Fisheries Commission's Pension Society. A trustee for several organizations, including the investment program (mutual funds) of the American Association of Retired Persons, Dr. Myers also serves on the boards of advisers of the Seniors Coalition and Studies on Smoking. An active participant in retirement and pension plan issues, Dr. Myers chaired the Commission on Railroad Retirement Reform (1988–90) and the Railroad Unemployment Compensation Committee (1983–85). He served on the Commission on the Social Security "Notch" Issue (1993–94) and was executive director of the National Commission on Social Security Reform (1982–83). In addition, Dr. Myers has served as an actuarial consultant to various congressional committees, as a technical adviser on Social Security and pension programs to numerous foreign countries, and as president of both the American Academy of Actuaries and the Society of Actuaries. He has published widely on topics related to Social Security and retirement, and is professor emeritus at Temple University. He received a B.S. degree from Lehigh University, an M.S. degree from the University of Iowa, and honorary degrees from Lehigh University and Muhlenberg College.

Donald R. Oder

Donald R. Oder is executive vice president and chief operating officer of Rush-Presbyterian-St. Luke's Medical Center in Chicago, where he formerly was senior vice president. Before that, he was audit manager with Arthur Andersen & Co. in Chicago. Mr. Oder has held various academic appointments and currently is a professor in the Department of Health Systems Management at the Rush University College of Health Sciences. He is a member of and has held leadership positions in several professional associations, including the American College of Healthcare Executives, the American Hospital Association, the Illinois Hospital Association, Voluntary Hospitals of America, the American Institute of Certified Public Accountants, and the Illinois C.P.A. Society. He has served on the board of directors of the Better Business Bureau of Metropolitan Chicago, Inc., and on the occupational health committee of the Chicago Association of Commerce and Industry. Mr. Oder received a B.S. from Wichita State University, a C.P.A. certificate from the University of Illinois, and an M.B.A. from the University of Chicago.

Elliott C. Roberts Sr.*

Elliott C. Roberts Sr. is a professor in the Department of Health Systems Research and Public

Health at the Louisiana State University Medical School. He is also an adjunct professor and preceptor in the Department of Health Systems Management at Tulane University School of Public Health and Tropical Medicine. In his previous position as chief executive officer of the Medical Center of Louisiana (formerly Charity Hospital at New Orleans), he assisted in the implementation of the reorganization of the Louisiana State Department of Health and Human Resources, which ultimately became the Louisiana Health Care Authority. Mr. Robert's prior positions include chief executive officer of Cook County Hospital in Chicago, vice president and associate project director for Hyatt Medical Management Services, and commissioner of hospitals and executive director of Detroit General Hospital. He also served as executive director at Harlem Hospital Center and Mercy Douglass Hospital in Philadelphia. An active member of the American Hospital Association, Mr. Roberts was on the organization's board of trustees for five years, formerly chaired its Metropolitan Hospital Constituency Section, and served on its nominating committee, and in other capacities. Mr. Roberts has held similar positions of responsibility at the National Association of Public Hospitals and the Association of American Medical Colleges' Council on Teaching Hospitals. He is also a diplomate of the American College of Healthcare Executives. In addition to many other appointments, Mr. Roberts served on the Secretary's Commission on Nursing, Department of Health and Human Services. He received a B.A. from Morgan State College and an M.A. in business administration-hospital administration from the George Washington University.

Glenda Rosenbloom

Glenda Rosenbloom has been vice president and assistant vice president for prospective payment for American Medical International since 1983. Previously, she was health care consulting manager at Ernst & Whinney, where she was responsible for training hospital personnel implementing the Medicare prospective payment system. From 1972 to 1982, Ms. Rosenbloom was senior director for Medicare provider payment at the Blue Cross Blue Shield Association. Before that, she was audit supervisor at Peat, Marwick, Mitchell. She co-chairs the Medicare Technical Advisory Group, which includes senior officials from the Health Care Financing Administration, the hospital industry, Peer Review Organizations, and fiscal intermediaries. The group's purpose is to improve the quality of hospital-related Medicare program administration and policy. Ms. Rosenbloom serves on the board of the Federation of American Health Systems, chairs its legislative committee, and is vice chair of its health care financing committee. She received a B.S. from the University of Illinois and is a certified public accountant.

J. Michael Sadaj

J. Michael Sadaj is a physician in private practice and a member of Rocky Mountain Clinic in Butte, Montana, where he specializes in internal medicine and pulmonary diseases. He has served as secretary-treasurer, vice president, and president of St. James Community Hospital medical staff, as well as chief of the department of medicine and chairman of the credentialing committee. From 1979 to 1990, Dr. Sadaj was medical director of respiratory therapy and the pulmonary laboratory at St. James. For several years, he served on the Occupational Diseases Board of the state of Montana. A past president of the Montana Medical Association (1988–89), Dr. Sadaj has been a member of the executive committee since 1985. In addition, he has served as a delegate to the American Medical Association Resident Physician Section, Young Physician Section, and the House of Delegates, and from 1977 to 1979, was the resident member on the organization's Council on Constitution and Bylaws. Dr. Sadaj is a founding member of the board of directors of the Montana Professional Assistance Program and was a member of the Rural Physician Retention Trust Fund Advisory Board. In 1984, he was elected to the Butte-Silver Bow Government Study Commission. From 1974 to 1979, Dr. Sadaj was a resident in internal medicine and a fellow in pulmonary diseases at the University of Nebraska Medical Center. He received B.S. and M.D. degrees from the University of Nebraska.

Gerald M. Shea

Gerald M. Shea is executive assistant to the secretary-treasurer of the American Federation of Labor-Congress of Industrial Organizations. Previously, he was director of the employee benefits department and head of the A.F.L.-C.I.O.'s health care reform campaign. His prior experience

includes 12 years with the national office of the Service Employees International Union, where he held various positions, including health care division director from 1984 to 1993. Before that, he was executive director and business manager of two local union offices. Mr. Shea received a B.A. from Boston College.

Roxane B. Spitzer-Lehmann

Roxane B. Spitzer-Lehmann is vice president of managed care at MEDICUS Systems and visiting professor in the School of Business at the University of Colorado. Previously, she was corporate vice president of St. Joseph Health System in Orange, California, and chief operating officer of the Good Samaritan Hospital in Los Angeles. She holds various professorships at Texas Tech University Health Sciences Center; University of Southern California; University of California, Los Angeles; and Vanderbilt University. From 1981 to 1988, Dr. Spitzer-Lehmann was vice president, patient care services, at Cedars-Sinai Medical Center. Previously, she was director of nursing and practiced nursing in both inpatient and public health settings. She is a fellow of the American Academy of Nursing, a diplomate of the American College of Healthcare Executives, and serves on many other boards. Dr. Spitzer-Lehmann has written and spoken extensively on such issues as managing nonprofit organizations, cost containment, quality and productivity, nursing in the 1990s, and strategic management and leadership. She received a B.S. from Adelphi University, an M.A. in nursing service administration from Columbia University, and both an M.A. in management and an M.B.A. from Claremont Graduate School. Dr. Spitzer-Lehmann holds a Ph.D. in management from the Peter Drucker Management Center, Claremont Graduate School.

James R. Tallon Jr.

James R. Tallon Jr. is president of the United Hospital Fund of New York. He also chairs the Kaiser Commission on the Future of Medicaid and is a visiting lecturer at the Harvard University School of Public Health. In addition, he is a member of the board of commissioners of the Joint Commission on the Accreditation of Healthcare Organizations. Prior to joining the United Hospital Fund, he was the majority leader of the New York State Assembly, where he served for 19 years beginning in 1975. Mr. Tallon was a member of the executive committee of the National Academy for State Health Policy and served as liaison to the President's Task Force on Health Care Reform from the National Conference of State Legislatures. He also was a member of the Governor's Health Care Advisory Board's Task Force on the President's Health Care Plan in New York and chaired the committee on Medicaid of the Health Policy Agenda for the American People. Before his election to the Assembly, Mr. Tallon was the executive director of the NY-PENN Health Planning Council, one of New York's eight regional health planning agencies. Mr. Tallon received a B.A. from Syracuse University and completed graduate work at the Maxwell School of Citizenship and Public Affairs. He received an M.A. from Boston University.

Jae L. Wittlich

Jae L. Wittlich is senior vice president and chief operating officer, group benefits, CNA Insurance Companies. He also served as vice president of the group benefits department from 1985 to 1990 and as vice president of the group operations division from 1977 to 1985. Before joining CNA Insurance, Mr. Wittlich was with Allstate for 12 years, most recently as assistant vice president of group life and health operations. Besides being a member of the executive committee and board of directors of the Association of Private Pension and Welfare Plans, he serves on the boards of directors of the CNA Insurance Companies; Private Healthcare Systems, Inc.; the Foundation for Health Enhancement; Managed Healthcare Systems of New York; and the Health Insurance Association of America. In addition, Mr. Wittlich has served on many other industry association committees and lectured frequently on health care topics. He received the 1990 Health Insurance Association of America's Founders Medal. Mr. Wittlich is a fellow of the Society of Actuaries and a member of the American Academy of Actuaries. He holds B.A. and M.A. degrees from the University of Michigan.

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*Term expired 1995

Appendix B. Glossary

The following acronyms and terms are frequently referenced in Prospective Payment Assessment Commission (ProPAC) reports. Many definitions are from various Health Care Financing Administration publications and other sources, including the American Hospital Association, the Congressional Budget Office, the Congressional Research Service, the Institute of Medicine, the Office of Management and Budget, and the Physician Payment Review Commission, as well as the *Federal Register,* 48(171) September 1, 1983. Where necessary, ProPAC has developed or modified definitions consistent with its use of the terms in Commission documents.

ACRONYMS

AAPCC	Adjusted Average Per Capita Cost
ACR	Adjusted Community Rate
AFDC	Aid to Families with Dependent Children
AHA	American Hospital Association
AHCPR	Agency for Health Care Policy and Research
AMCRA	American Medical Care and Review Association
ASC	Ambulatory Surgical Center
CBO	Congressional Budget Office
CHAMPUS	Civilian Health and Medical Programs of the Uniformed Services
CMI	Case-Mix Index
CON	Certificate of Need
CORF	Comprehensive Outpatient Rehabilitation Facility
CPI	Consumer Price Index
CRS	Congressional Research Service
DoD	Department of Defense
DOJ	Department of Justice
DRG	Diagnosis-Related Group
DSH	Disproportionate Share
EBRI	Employee Benefit Research Institute
ECI	Employment Cost Index
ERISA	Employee Retirement Income Security Act of 1974
ESRD	End-Stage Renal Disease
FDA	Food and Drug Administration
FFS	Fee for Service
FR	Federal Register
FTC	Federal Trade Commission
FTE	Full-Time Equivalent
GAO	General Accounting Office
GDP	Gross Domestic Product
GHAA	Group Health Association of America
GME	Graduate Medical Education
HCFA	Health Care Financing Administration
HCPP	Health Care Prepayment Plan
HEDIS	Health Plan Employer Data and Information Set
HHA	Home Health Agency
HHS	Health and Human Services, Department of
HIAA	Health Insurance Association of America
HIV	Human Immunodeficiency Virus
HMO	Health Maintenance Organization
IME	Indirect Medical Education
IOM	Institute of Medicine
IPA	Independent Practice Association
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
MCCA	Medicare Catastrophic Coverage Act of 1988
MedPAR	Medicare Provider Analysis and Review file
MGCRB	Medicare Geographic Classification Review Board
MSA	Metropolitan Statistical Area
NCHS	National Center for Health Statistics
NCI	National Cancer Institute
NCQA	National Committee for Quality Assurance
OBRA	Omnibus Budget Reconciliation Act
OMB	Office of Management and Budget
PCCM	Primary Care Case Management
POS	Point of Service
PPO	Preferred Provider Organization
PPRC	Physician Payment Review Commission
PPS	Prospective Payment System
PRO	Peer Review Organization
ProPAC	Prospective Payment Assessment Commission
RBRVS	Resource-Based Relative Value Scale
SCH	Sole Community Hospital
SHMO	Social Health Maintenance Organization
SNF	Skilled Nursing Facility
SSI	Supplemental Security Income
TEFRA	Tax Equity and Fiscal Responsibility Act of 1982
UR	Utilization Review
VA	Veterans Affairs, Department of
VPS	Volume Performance Standard

TERMS

Adjusted Admissions—A measure of all patient care activity undertaken in a hospital, both inpatient and outpatient. Adjusted admissions are equivalent to the sum of inpatient admissions and an estimate of the volume of outpatient services. This estimate is calculated by multiplying outpatient visits by the ratio of outpatient charges per visit to inpatient charges per admission. (AHA and ProPAC)

Adjusted Average Per Capita Cost (AAPCC)—Actuarial projections of per capita Medicare spending for enrollees in fee-for-service Medicare. Separate AAPCCs are calculated—usually at the county level—for Part A services and Part B services for the aged, disabled, and people with ESRD. Medicare

pays risk plans by applying adjustment factors to 95 percent of the Part A and Part B AAPCCs. The adjustment factors reflect differences in Medicare per capita fee-for-service spending related to age, sex, institutional status, Medicaid status, and employment status. (ProPAC)

Aggregate PPS Operating Margin/Aggregate Total Margin—A PPS operating margin or total margin that compares revenue to expenses for a group of hospitals, rather than a single hospital. It is computed by subtracting the sum of expenses for all hospitals in the group from the sum of revenues and dividing by the sum of revenues. (See also PPS Operating Margin and Total Margin.) (ProPAC)

Ambulatory Surgical Center (ASC)—A free-standing facility certified by Medicare that performs a limited number of types of procedures on an outpatient basis. (ProPAC)

ASC-Approved Procedure—A procedure that has been approved by Medicare for payment in the ASC. A procedure is approved if it can be performed safely in the outpatient setting, if it was performed in the inpatient setting at least 20 percent of the time when it was approved, and if it is performed in physicians' offices no more than 50 percent of the time. (HCFA)

Balance Billing—Physician charges in excess of Medicare-allowed amounts, for which Medicare patients are responsible, subject to a limit. (ProPAC)

Basic DRG Payment Rate—The payment rate a hospital will receive for a Medicare patient in a particular diagnosis-related group. The payment rate is calculated by adjusting the standardized amount to reflect wage rates (and non-wage cost of living differences) in the hospital's geographic area and the costliness of the DRG. (See also Standardized Amount.) (ProPAC)

Beneficiary—A person enrolled in the Medicare program. (See also Enrollee.) (ProPAC)

Beneficiary Liability—The amount beneficiaries must pay providers for Medicare-covered services. Liabilities include copayments, deductibles, and balance billing amounts. Beneficiaries also are responsible for paying the Medicare program for their share of the Part B premium. (ProPAC)

Bundling—The use of a single payment for a group of related services. (PPRC)

Capital Costs—Medicare defines capital costs as depreciation, interest, leases and rentals, and taxes and insurance on tangible assets like physical plant and equipment. (ProPAC)

Capitation—A method of paying health care providers or insurers in which a fixed amount is paid per enrollee to cover a defined set of services over a specified period, regardless of actual services provided. (See also Bundling, Fee for Service, Per Diem, and Rate Setting.) (ProPAC)

Carrier—An organization, typically an insurance company, that has a contract with the Health Care Financing Administration to administer claims processing and make Medicare payments to health care providers for most Medicare Part B benefits. (See also Fiscal Intermediary and Part B.) (HCFA)

Case Mix—The mix of patients treated within a particular institutional setting, such as the hospital. Patient classification systems like the DRG system, can be used to measure hospital case mix. (See also DRGs and Case-Mix Index) (ProPAC)

Case-Mix Index (CMI)—The average DRG weight for all cases paid under PPS. It is a measure of the relative costliness of the patients treated in each hospital or group of hospitals. (See also DRG.) (ProPAC)

Charges—The posted prices of services provided by a facility. Medicare requires hospitals to apply the same schedule of charges to all patients, regardless of the expected sources or amount of payment.

Cost Contract—An arrangement between a managed health care plan and HCFA under Section 1876 or 1833 of the Social Security Act, under which the health plan provides health services and is reimbursed its costs. The beneficiary can use providers outside the plan's provider network. (See also Health Care Prepayment Plan and Risk Contract.) (ProPAC)

Cost Shifting—Increasing revenues from some payers to offset uncompensated care losses and lower net payments from other payers. (ProPAC)

Diagnosis-Related Groups (DRGs)—A system for determining case mix, used for payment under Medicare's PPS and by some other payers. The DRG system classifies patients into groups based on the principal diagnosis, the presence and type of surgical procedure, presence or absence of significant comorbidities or complications, and other relevant criteria. DRGs are intended to categorize patients into groups that are clinically meaningful and homogeneous with respect to resource use. There are currently 490 mutually exclusive DRGs in Medicare's PPS, each of which is assigned a relative weight that compares its costliness to the average for all DRGs. (See also Case Mix.) (ProPAC)

Disproportionate Share (DSH) Adjustment—A payment adjustment under Medicare's PPS or under Medicaid for hospitals that serve a relatively large volume of low-income patients. (CBO)

Enrollee—A person who is covered by health insurance. (See also Beneficiary.) (ProPAC)

Excluded Hospitals and Distinct-Part Units—Hospitals and hospital units that are specifically excluded from Medicare's PPS. These include children's, cancer, long-term, rehabilitation, and psychiatric hospitals. Rehabilitation or psychiatric units of acute care hospitals are exempt if they meet certain criteria specified by the Secretary of HHS. Hospitals located in U.S. territories, Federal hospitals, and Christian Science Sanatoria are also excluded from PPS. Excluded facilities remain under cost-based reimbursement, subject to rate of increase limits, established in accordance with TEFRA. (See also Tax Equity and Fiscal Responsibility Act of 1982.) (48 FR 39755)

Fee for Service (FFS)—A method of reimbursing health care providers in which payment is made for each unit of service rendered. (See also Bundling, Capitation, Per Diem, and Rate Setting.) (ProPAC)

Fiscal Intermediary—An entity, usually an insurance company, that has a contract with HCFA to determine and make Medicare payments for Part A and certain Part B benefits to hospitals and other providers of services and to perform related functions. (See also Part A and Part B.) (HCFA)

Fiscal Year—A 12-month period for which an organization plans the use of its funds, such as the Federal government's fiscal year (October 1 to September 30). Fiscal years are referred to by the calendar year in which they end; for example, the Federal fiscal year 1994 began October 1, 1993, and ended September 30, 1994. Individual providers can designate their own fiscal years, and this is reflected in differences in the time periods covered by the Medicare Cost Reports. (See also PPS year.) (ProPAC)

Graduate Medical Education (GME)—The period of training following the completion of medical school when physicians, as residents, receive training in a specialty, such as family practice, general surgery, or anesthesiology. Medicare recognizes its share of the direct costs for these training programs in hospitals (including residents' salaries and benefits, faculty supervisory costs, program administration, and facility overhead costs) through a prospectively set, hospital-specific, per-resident payment. (ProPAC)

Gross Domestic Product (GDP)—The value of all goods and services produced within the United States' boundaries during a given period. (ProPAC)

Health Care Prepayment Plan (HCPP)—Plans that receive payment for their reasonable costs of providing Medicare Part B services to Medicare enrollees. (See also Cost Contract and Risk Contract.) (AMCRA)

Health Maintenance Organization (HMO)—A managed care plan that integrates financing and delivery of a comprehensive set of health care services to an enrolled population. HMOs may contract with, directly employ, or own participating health care providers. Enrollees are usually required to choose from among these providers and in return have limited copayments. Providers may be paid through capitation, salary, per diem, or prenegotiated fee-for-service rates. (See also Capitation, Fee for Service, Managed Care, Managed Care Plan, Per Diem, and Preferred Provider Organization.) (ProPAC)

Health Plan Employer Data and Information Set (HEDIS)—A set of standardized measures of health plan performance. HEDIS allows comparisons between plans on quality, access and patient satisfaction, membership and utilization, financial information, and health plan management. HEDIS was developed by employers, HMOs, and NCQA. (NCQA)

Indirect Medical Education (IME) Adjustment—A payment adjustment applied to DRG and outlier payments under PPS for hospitals that operate an approved graduate medical education program. For operating costs, the adjustment is based on the hospital's ratio of the number of interns and residents to the number of beds. For capital costs, it is based on the hospital's ratio of interns and residents to average daily census. (HCFA)

Intensity of Services—The number and complexity of patient care services used per admission or outpatient visit in the case of hospitals, nursing home day, home health visit, or dialysis treatment. Examples of services contributing to an admission or outpatient visit include nursing care, surgeries, and radiological procedures. (ProPAC)

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)—A diagnosis and procedure classification system designed to facilitate collection of uniform and comparable health information. The disease classification is revised periodically. The ICD-9-CM is the current version and was issued in 1979. This system is the basis for grouping patients into DRGs. (HCFA)

Large Urban Area—A metropolitan statistical area with a population of one million or more, or a New England County Metropolitan Area with a population of 970,000 or more. (See also Metropolitan Statistical Area and Other Urban Area.) (ProPAC)

Long-Term Care—Ongoing health and social services provided for individuals who need assistance on a continuing basis because of physical or mental disability. Services can be provided in an institution, the home, or the community, and include informal services provided by family or friends as well as formal services provided by professionals or agencies. (IOM)

Major Teaching Hospitals—Hospitals with an approved graduate medical education program and a ratio of interns and residents to beds of 0.25 or greater. (See also Indirect Medical Education Adjustment and Other Teaching Hospitals.) (HCFA)

Managed Care—Any payment or delivery arrangement used by a health plan or provider to control or coordinate use of health services to contain health expenditures, improve quality, or both. Utilization review is a common example of a managed care technique. (See also Managed Care Plan and Utilization Review.) (PPRC)

Managed Care Plan—A health plan that uses managed care arrangements and has a defined system of selected providers that contract with the plan. Enrollees have a financial incentive to use participating providers that agree to furnish a broad range of services to them. Providers may be paid on a prenegotiated fee-for-service, capitated, per diem, or salaried basis. (See also Health Maintenance Organization, Point-of-Service Plan, and Preferred Provider Organization.) (ProPAC)

Market Basket Index—An index of the annual change in the prices of goods and services providers used to produce health services, also referred to as an input price index. There are separate market baskets for PPS hospital operating inputs, PPS hospital capital inputs, PPS-excluded facility operating inputs, SNFs, HHAs, and renal dialysis facility operating and capital inputs. (ProPAC)

Medicare Cost Report (MCR)—An annual report required of all institutions participating in the Medicare program. The MCR records each institution's total costs and charges associated with providing services to all patients, the portion of those costs and charges allocated to Medicare patients, and the Medicare payments received. (See also PPS year.) (ProPAC)

Medicare Provider Analysis and Review (MedPAR) File—A HCFA data file that contains charge data and clinical characteristics, such as diagnoses and procedures, for every hospital inpatient bill submitted to Medicare for payment. (ProPAC)

Medigap Policy—A privately purchased insurance policy that supplements Medicare coverage and meets specified requirements set by Federal statute and the National Association of Insurance Commissioners. (ProPAC)

Metropolitan Statistical Area (MSA)—A geographic area that includes at least one city with 50,000 or more inhabitants, or a Census Bureau-defined urbanized area of at least 50,000 inhabitants

and a total MSA population of at least 100,000 (75,000 in New England). (OMB)

National Practitioner Data Bank—A computerized data bank maintained by the Federal government that contains information on physicians and other practitioners against whom malpractice claims have been paid or certain disciplinary actions have been taken. (PPRC)

Nursing Facility—An institution that provides skilled nursing care and rehabilitation services to injured, functionally disabled, or sick persons. Formerly, distinctions were made between intermediate care facilities (ICFs) and skilled nursing facilities (SNFs). The Omnibus Budget Reconciliation Act of 1987 eliminated this distinction effective October 1, 1990, by requiring ICFs to meet SNF certification requirements. (See also Skilled Nursing Facility.) (ProPAC)

Other Teaching Hospitals—Hospitals with an approved graduate medical education program and a ratio of interns and residents to beds less than 0.25. (See also Indirect Medical Education Adjustment and Major Teaching Hospitals.) (ProPAC)

Other Urban Area—A metropolitan statistical area with a population of less than one million, or a New England County Metropolitan Area with fewer than 970,000 people. (See also Large Urban Area and Metropolitan Statistical Area.) (ProPAC)

Outliers—Under PPS, cases with extremely long lengths of stay (day outliers) or extraordinarily high costs (cost outliers) compared with others classified in the same diagnosis-related group. Hospitals receive additional payment for these cases. (ProPAC)

Part A—Medicare Hospital Insurance (HI) (Part A of Title XVIII of the Social Security Act), which covers beneficiaries for inpatient hospital, home health, hospice, and limited skilled nursing facility services. Beneficiaries are responsible for deductibles and copayments. Part A services are financed by the Medicare HI Trust Fund, which consists of Medicare tax payments. (See also Fiscal Intermediary and Part B.) (ProPAC)

Part B—Medicare Supplementary Medical Insurance (SMI) (Part B of Title XVIII of the Social Security Act), which covers Medicare beneficiaries for physician services, medical supplies, and other outpatient treatment. Beneficiaries are responsible for monthly premiums, copayments, deductibles, and balance billing. Part B services are financed by a combination of enrollee premiums and general tax revenues. (See also Carrier and Part A.) (ProPAC)

Peer Review Organization (PRO)—An organization that contracts with HCFA to investigate the quality of health care furnished to Medicare beneficiaries and to educate beneficiaries and providers. PROs also conduct limited review of medical records and claims to evaluate the appropriateness of care provided. (ProPAC)

Per Diem Payments—Fixed daily payments that do not vary with the level of services used by the patient. This method generally is used by managed care plans to pay institutional providers, such as hospitals and nursing facilities. (See also Capitation.) (ProPAC)

Point-of-Service Plan (POS)—A health plan with a network of providers whose services are available to enrollees at a lower cost than the services of non-network providers. POS enrollees must receive authorization from a primary care physician in order to use network services. POS plans typically do not pay for out-of-network referrals for primary care services. (See also PPO.) (AMCRA)

PPS Operating Margin—A measure that compares PPS operating payments with Medicare-allowable inpatient operating costs. This measure excludes Medicare costs and payments for capital, direct medical education, organ acquisition, and other categories not included among Medicare-allowable inpatient operating costs. It is calculated by subtracting total Medicare-allowable inpatient operating costs from total PPS operating payments and dividing by total PPS operating payments. (ProPAC)

PPS Year—A designation referring to hospital cost reporting periods that begin during a given Federal fiscal year, reflecting the number of years since the initial implementation of PPS. For example, PPS 1 refers to hospital fiscal years beginning during in Federal fiscal year 1984, which was the first year of PPS. For a hospital with a fiscal year beginning July 1, PPS 1 covers the period from July 1, 1984, through June 30, 1985. (See also Fiscal Year.) (ProPAC)

Preferred Provider Organization (PPO)—A health plan with a network of providers whose services are available to enrollees at lower cost than the services of non-network providers. PPO enrollees may self-refer to any network provider at any time. (See also Fee for Service, Health Maintenance Organization, Managed Care, Managed Care Plan, and Point-of-Service Plan.) (ProPAC)

Primary Care Case Management (PCCM)—A Medicaid managed care program in which an eligible individual may use services only with authorization from his or her assigned primary care provider. That provider is responsible for locating, coordinating, and monitoring all primary and other medical services for enrollees. (HCFA)

Productivity—The ratio of outputs (goods and services produced) to inputs (resources used in production). Increased productivity implies that the hospital or health care organization is either producing more output with the same resources or the same output with fewer resources. (ProPAC)

Prospective Payment—A method of paying health care providers in which rates are established in advance. Providers are paid these rates regardless of the costs they actually incur. (ProPAC)

Prospective Payment System (PPS)—Medicare's acute care hospital payment method for inpatient care. Prospective per-case payment rates are set at a level intended to cover operating costs in an efficient hospital for treating a typical inpatient in a given diagnosis-related group. Payments for each hospital are adjusted for differences in area wages, teaching activity, care to the poor, and other factors. Hospitals may also receive additional payments to cover extra costs associated with atypical patients (outliers) in each DRG. Capital costs, originally excluded from PPS, are being phased into the system. By 2001, capital payments will be made on a fully prospective, per-case basis. (See also Capital Costs, Diagnosis-Related Groups, Outliers, and Prospective Payment.) (ProPAC)

Rate Setting—A method of paying health care providers in which the Federal or state government establishes payment rates for one or more payers for various categories of health services. (PPRC and ProPAC)

Relative Value Scale—An index that assigns weights to each medical service; the weights represent the relative amount to be paid for each service. The relative value scale used in the development of the Medicare Physician Fee Schedule consists of three cost components: physician work, practice expense, and malpractice expense. (PPRC)

Resource-Based Relative Value Scale (RBRVS)—A relative value scale that is based on the resources involved in providing a service. (See also Relative Value Scale.) (PPRC)

Risk Adjustment—Increases or reductions in the amount of payment made to a health plan on behalf of a group of enrollees to compensate for health care expenditures that are expected to be higher or lower than average. (See also Risk Selection.) (PPRC and ProPAC)

Risk Contract—An arrangement between a managed health care plan and HCFA under section 1876 of the Social Security Act. Under this contract, the enrolled Medicare beneficiary must use the plans' network of providers. Payment to the plans is made on a capitated basis using the AAPCC. (See also Adjusted Average Per Capita Cost, Capitation, Cost Contract, and Health Care Prepayment Plan.) (ProPAC)

Risk Selection—Enrollment choices made by health plans or enrollees on the basis of perceived risk relative to the premium to be paid. (See also Risk Adjustment.) (PPRC and ProPAC)

Skilled Nursing Facility (SNF)—An institution that has a transfer agreement with one or more hospitals, provides primarily inpatient skilled nursing care and rehabilitative services, and meets other specific certification requirements. (See also Nursing Facility.) (IOM)

Sole Community Hospital—A hospital that is designated for special treatment under PPS as the only provider of hospital care in its market area. Under PPS, sole community hospitals benefit from payment provisions intended to ensure their financial viability and access to hospital services for Medicare beneficiaries. (ProPAC)

Standardized Amount—An amount used as the basis for payment under PPS that is intended to

represent the national average operating cost of inpatient treatment for a typical Medicare patient in a reasonably efficient hospital in a large urban or other area. Standardized amounts are based on Medicare costs reported by hospitals for cost reporting periods ending in 1982, adjusted for geographic location and certain hospital characteristics, such as teaching activity. The adjusted amounts are updated to the year of payment by an annual update factor. (See also Update Factors.) (CRS)

Supplemental Insurance—Any private health insurance plan held by a Medicare beneficiary, including medigap policies and post-retirement health benefits. (ProPAC)

Swing-Bed Hospital—A hospital participating in the Medicare swing-bed program. This program allows rural hospitals with fewer than 100 beds to provide skilled post-acute care services in acute care beds. (HCFA)

Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA)—Legislation that established target rate of increase limits on reimbursements for inpatient operating costs per discharge under Medicare. A facility's target amount is derived from costs in a base year updated to the current year by the annual allowable rate of increase. Medicare payments for operating costs generally may not exceed the facility's target amount. These provisions still apply to hospitals and units excluded from PPS. (See also Excluded Hospitals and Units.) (ProPAC)

Total Margin—A measure that compares total hospital revenue and expenses for inpatient, outpatient, and non-patient care activities. The total margin is calculated by subtracting total expenses from total revenue and dividing by total revenue. (ProPAC)

Uncompensated Care—Care rendered by hospitals or other providers without payment from the patient or a government-sponsored or private insurance program. It includes both charity care, which is provided without the expectation of payment, and bad debts, for which the provider has made an unsuccessful effort to collect payment due from the patient. (ProPAC)

Update Factor—The increase in base payment amounts from one year to the next for PPS and excluded hospitals and dialysis facilities. The update factors generally are legislated by the Congress in consideration of annual recommendations provided by ProPAC and the Secretary of HHS. ProPAC's update factors are intended to reflect changes in the prices of inputs used to provide patient care services, as well as changes in productivity, technological advances, quality of care, and long-term cost-effectiveness of services. ProPAC recommends separate update factors for PPS hospital operating payments, PPS hospital capital payments, the TEFRA target amounts for PPS-excluded hospitals and distinct-part units, and composite rate payments to dialysis facilities. (See also Market Basket Index.) (ProPAC)

Utilization Review (UR)—The review of services delivered by a health care provider to evaluate the appropriateness, necessity, and quality of the prescribed services. The review can be performed on a prospective, concurrent, or retrospective basis. (ProPAC)

Volume Performance Standard (VPS)—A mechanism to adjust updates to fee-for-service payment rates based on how actual aggregate expenditure increases compare to predetermined target rates of increase. (See also Fee for Service.) (PPRC and ProPAC)

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